



# 27

## Tobacco Use

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Lead Agency: Centers for Disease Control and Prevention

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## Goal

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### **Reduce illness, disability, and death related to tobacco use and exposure to secondhand smoke.**

## Overview

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Scientific knowledge about the health effects of tobacco use has increased greatly since the first Surgeon General's report on tobacco was released in 1964.<sup>1,2</sup> Cigarette smoking causes heart disease, several kinds of cancer (lung, larynx, esophagus, pharynx, mouth, and bladder), and chronic lung disease. Cigarette smoking also contributes to cancer of the pancreas, kidney, and cervix. Smoking during pregnancy causes spontaneous abortions, low birth weight, and sudden infant death syndrome.<sup>3</sup>

Other forms of tobacco are not safe alternatives to smoking cigarettes. Use of spit tobacco causes a number of serious oral health problems, including cancer of the mouth and gum, periodontitis, and tooth loss.<sup>1,4</sup> Cigar use causes cancer of the larynx, mouth, esophagus, and lung.<sup>5</sup> In recent years, reports have shown an increase in the popularity of bidis.<sup>6</sup> Bidis are small brown cigarettes, often flavored, consisting of tobacco hand-rolled in tendu or temburni leaf and secured with a string at one end. Research shows that bidis are a significant health hazard to users, increasing the risk of coronary heart disease and cancer of the mouth, pharynx and larynx, lung, esophagus, stomach, and liver.<sup>7</sup>

## Issues and Trends

Tobacco use is responsible for more than 430,000 deaths per year among adults in the United States, representing more than 5 million years of potential life lost.<sup>8</sup> If current tobacco use patterns persist in the United States, an estimated 5 million persons under age 18 years will die prematurely from a smoking-related disease.<sup>9</sup> Direct medical costs related to smoking total at least \$50 billion per year;<sup>10</sup> direct medical costs related to smoking during pregnancy are approximately \$1.4 billion per year.<sup>11</sup>

Evidence is accumulating that shows maternal tobacco use is associated with mental retardation and birth defects such as oral clefts. Exposure to secondhand smoke also has serious health effects.<sup>12, 13, 14</sup> Researchers have identified more than 4,000 chemicals in tobacco smoke; of these, at least 43 cause cancer in humans and animals.<sup>13</sup> Each year, because of exposure to secondhand smoke, an estimated 3,000 nonsmokers die of lung cancer, and 150,000 to 300,000 infants and children under age 18 months experience lower respiratory tract infections.<sup>13, 14</sup> Asthma and other respiratory conditions often are triggered or worsened by to-

bacco smoke. (See Focus Area 8. Environmental Health; Focus Area 16. Maternal, Infant, and Child Health; and Focus Area 24. Respiratory Diseases.)

Studies also have found that secondhand smoke exposure causes heart disease among adults.<sup>15, 16</sup> Data reported from a study of the U.S. population aged 4 years and older indicated that among nontobacco users, 88 percent had detectable levels of serum cotinine, a biological marker for exposure to secondhand smoke.<sup>17</sup> Both home and workplace environments have contributed to the widespread exposure to secondhand smoke. Data from a 1996 study indicated that 22 percent of U.S. children and adolescents under age 18 years (approximately 15 million children and adolescents) were exposed to secondhand smoke in their homes.<sup>18</sup>

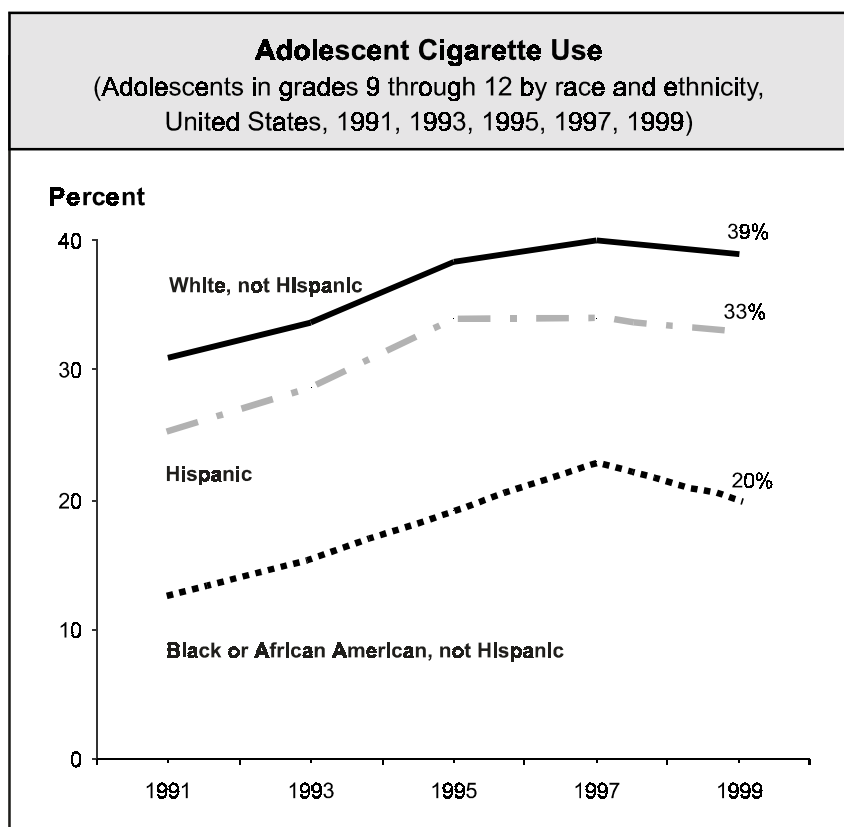
Smoking among adults declined steadily from the mid-1960s through the 1980s. However, smoking among adults appears to have leveled off in the 1990s. The rate of smoking among adults in 1997 was 25 percent.<sup>19</sup>

Tobacco use and addiction usually begin in adolescence. Furthermore, tobacco use may increase the probability that an adolescent will use other drugs. (See Focus Area 26. Substance Abuse.) Among adults in the United States who have ever smoked daily, 82 percent tried their first cigarette before age 18 years, and 53 percent became daily smokers before age 18 years.<sup>20</sup> Preventing tobacco use among youth has emerged as a major focus of tobacco control efforts.

Tobacco use among adolescents increased in the 1990s after decreasing in the 1970s and 1980s. Data from the 1999 Monitoring the Future Study indicated that past-month smoking among 8th, 10th, and 12th graders was 18, 26, and 35 percent, respectively. These rates represent increases of 20 to 33 percent since 1991.<sup>21</sup> Data from the Youth Risk Behavior Survey revealed that past-month smoking among 9th to 12th graders rose from 28 percent in 1991 to 36 percent in 1997.<sup>22</sup> Past-month spit tobacco use among 9th to 12th graders was 9 percent in 1997 (2 percent among females and 16 percent among males).<sup>22</sup> In 1997, past-month cigar use among 9th to 12th graders was 22 percent (11 percent of females and 31 percent of males).<sup>22</sup>

Youth are put at increased risk of initiating tobacco use by sociodemographic, environmental, and personal factors. Sociodemographic risk factors include coming from a family with low socioeconomic status. Environmental risk factors include accessibility and availability of tobacco products, cigarette advertising and promotion practices, the price of tobacco products, perceptions that tobacco use is normal, peers' and siblings' use and approval, and lack of parental involvement. Personal risk factors include low self-image and low self-esteem, the belief that tobacco use provides a benefit, and the lack of ability to refuse offers to use tobacco.<sup>20</sup>

Overwhelming evidence indicates that nicotine found in tobacco is addictive and that addiction occurs in most smokers during adolescence.<sup>20, 23</sup> Among students who were high school seniors during 1976–86, 44 percent of daily smokers



**Source:** CDC, NCCDPHP. Youth Risk Behavior Surveillance System (YRBSS), 1991, 1993, 1995, 1997, 1999.

believed that in 5 years they would not be smoking. Followup studies, however, indicated that 5 to 6 years later 73 percent of these persons remained daily smokers.<sup>20</sup> In 1995, 68 percent of current smokers wanted to quit smoking completely, and 46 percent of the current daily smokers had stopped smoking for at least 1 day during the preceding 12 months.<sup>19</sup> Less than 3 percent of current smokers stopped smoking permanently.<sup>24</sup>

## Disparities

Men are more likely to smoke than women (26 percent compared to 22 percent).<sup>19</sup> Disparities in tobacco use exist among certain racial and ethnic populations. American Indians or Alaska Natives (35 percent) are more likely to smoke than other racial and ethnic groups, with considerable variations in percentages by Tribe.<sup>25</sup> Hispanics (18 percent) and Asians or Pacific Islanders (13 percent) are less likely to smoke than other groups. Regional and local data, however, reveal much higher smoking levels among specific population groups of Hispanics and Asians or Pacific Islanders.<sup>25</sup> Smoking levels among Vietnamese and Korean Asian Americans are higher than previously reported, according to a 1997 multi-lingual survey.<sup>26</sup>

Studies have found higher levels of cigarette use among gay men and lesbians than among heterosexuals.<sup>27, 28, 29, 30</sup> Gay men and lesbians with higher education levels are less likely to use cigarettes as frequently as those with lower levels of education.<sup>28</sup>

Persons with 9 to 11 years of education (38 percent) have significantly higher levels of smoking than individuals with 8 years or less of education or 12 years or more. Individuals with 16 or more years of education have the lowest smoking rates (11 percent). Individuals who are poor are significantly more likely to smoke than individuals of middle or high income (34 percent compared to 21 percent).<sup>19</sup>

Data reveal high levels of tobacco use among college students. In 1995, 29 percent of college students smoked in the previous month (28 percent of females and 30 percent of males). Five percent of college students used spit tobacco in the previous month (0.3 percent of females and 12 percent of males).<sup>31</sup>

Among adolescents, smoking rates differ between whites and African Americans.<sup>21, 22</sup> By the late 1980s, smoking rates among white teens were more than triple those of African American teens. In recent years, smoking has started to increase among African American male teens, but African American female teens continue to have lower smoking rates. In 1997, 40 percent of white high school females were smokers, compared to 17 percent of African American high school females.<sup>22</sup>

Spit tobacco use among adolescents also differs significantly by students' gender, race, and ethnicity. In 1997, 15.8 percent of male high school students currently used spit tobacco, compared to only 1.5 percent of female high school students. Current spit tobacco use was 12.2 percent for non-Hispanic whites, 2.2 percent for non-Hispanic African Americans, and 5.1 percent for Hispanics.<sup>22</sup>

## Opportunities

Efforts to reduce tobacco use in the United States have shifted from focusing primarily on smoking cessation for individuals to more population-based interventions. Such interventions emphasize prevention of initiation, reduction of exposure to environmental tobacco smoke, and policy changes in health care systems to promote smoking cessation.<sup>20, 32, 33, 34, 35, 36, 37</sup> Federal, State, and local government agencies and numerous health organizations have joined together to develop and implement population-based approaches.

Community research studies and evidence from California, Florida, Massachusetts, and Oregon have shown that comprehensive programs can be effective in reducing average cigarette consumption per person. Both California and Massachusetts increased cigarette excise taxes and designated a portion of the revenues for comprehensive tobacco control programs. Data from these States indicate that (1) increasing excise taxes on cigarettes is one of the most cost-effective short-term strategies to reduce tobacco consumption among adults and to prevent initia-

tion among youth and (2) the ability to sustain lower consumption increases when the tax increase is combined with an antismoking campaign.<sup>38</sup> In addition, recent data from Florida indicate that past-month smoking decreased significantly among public middle school students (19 percent to 15 percent) and high school students (27 percent to 25 percent) from 1998 to 1999 following implementation of a comprehensive program to prevent and reduce tobacco use among youth in that State.<sup>39</sup>

As education programs for school-aged youth are developed and proven effective in preventing initiation and in cessation, these programs should be included in quality health education curricula at the grade level. Education should aim to prevent initiation among youth, provide knowledge about effective cessation methods, and increase understanding of the health effects of tobacco use. (See Focus Area 7. Educational and Community-Based Programs.)

The goals of comprehensive tobacco prevention and reduction efforts include preventing people from starting to use tobacco, helping people quit using tobacco, reducing exposure to secondhand smoke, and identifying and eliminating disparities in tobacco use among population groups. To address these goals, community programs, media interventions, policy and regulatory activities, and surveillance and evaluation programs are being implemented. Specifically, the following elements are used to build capacity to implement and support tobacco use prevention and control interventions: a focus on change in social norms and environments that support tobacco use, policy and regulatory strategies, community participation, establishment of public and private partnerships, strategic use of media, development of local programs, coordination of statewide and local activities, linkage of school-based activities to community activities, and use of data collection and evaluation techniques to monitor program impact.

The importance of these various strategic elements has been demonstrated in a number of States, such as Arizona, California, Florida, Massachusetts, and Oregon.<sup>40</sup> In these and other States, tobacco control programs are supported through funding from the Federal Government, private foundations, State tobacco taxes, State lawsuit settlements, and other sources. These programs address issues such as reducing exposure to secondhand smoke, restricting minors' access to tobacco, treating nicotine addiction, limiting the impact of tobacco advertising, increasing the price of tobacco products, and directly regulating the product (for example, requiring product ingredient reporting). Tobacco control programs and materials should be culturally and linguistically appropriate.

## Interim Progress Toward Year 2000 Objectives

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Of the 26 tobacco-related objectives, 3 have been met: reducing the rate of lung cancer deaths, reducing the rate of oral cancer deaths, and increasing the number of States that have tobacco control plans.

Sixteen additional objectives are showing progress. These include reducing cigarette smoking among adults, which declined in the early part of the 1990s and then leveled off, and reducing children's exposure to secondhand smoke, which also declined. Some objectives, though showing progress, are far from their targets. For example, although 13 States have laws limiting smoking in public places and worksites, few ban smoking or limit it to separately ventilated areas in private workplaces or restaurants. As of December 31, 1998, only one State had met the objective for private worksites, and three had met it for restaurants. All 50 States and the District of Columbia have laws prohibiting the sale of tobacco to minors. However, the objective on enforcement of minors' access laws to achieve illegal buy rates of no more than 20 percent is far from being met: in fiscal year 1998, only 12 States had met this target. Although Healthy People 2000 data indicate that smoking among adolescents is declining somewhat, other surveys indicate that smoking among youth increased through 1997 and remained unchanged or declined somewhat in 1998 and 1999. Two additional objectives that include the use of and perception of harm from using drugs, alcohol, and cigarettes by high school seniors show mixed progress; for cigarettes there is slight progress.

Three objectives (perception of social disapproval of cigarette smoking among adolescents, States with preemptive clean indoor air laws, and smoking cessation during pregnancy) are moving away from the targets.

Data beyond baseline were not available for two objectives (tobacco product advertising and promotion to youth, and health plans offering treatment for nicotine addiction).

Note: Unless otherwise noted, data are from the Centers for Disease Control and Prevention, National Center for Health Statistics, *Healthy People 2000 Review, 1998–99*.



## Healthy People 2010—Summary of Objectives

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### Tobacco Use

**Goal:** Reduce illness, disability, and death related to tobacco use and exposure to secondhand smoke.

<b>Number</b>	<b>Objective</b>	<b>Short Title</b>
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<b>Number</b>	<b>Objective</b>	<b>Short Title</b>
<b>Tobacco Use in Population Groups</b>		

- |      |                           |  |
|------|---------------------------|--|
| 27-1 | Adult tobacco use         |  |
| 27-2 | Adolescent tobacco use    |  |
| 27-3 | Initiation of tobacco use |  |
| 27-4 | Age at first tobacco use  |  |

<b>Cessation and Treatment</b>		
--------------------------------	--	--

- |      |   |  |
|------|---|--|
| 27-5 | Smoking cessation by adults               |  |
| 27-6 | Smoking cessation during pregnancy        |  |
| 27-7 | Smoking cessation by adolescents          |  |
| 27-8 | Insurance coverage of cessation treatment |  |

<b>Exposure to Secondhand Smoke</b>		
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- |       |  |  |
|-------|--|--|
| 27-9  | Exposure to tobacco smoke at home among children |  |
| 27-10 | Exposure to environmental tobacco smoke          |  |
| 27-11 | Smoke-free and tobacco-free schools              |  |
| 27-12 | Worksite smoking policies                        |  |
| 27-13 | Smoke-free indoor air laws                       |  |

<b>Social and Environmental Changes</b>		
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- |       |  |  |
|-------|--|--|
| 27-14 | Enforcement of illegal tobacco sales to minors laws                      |  |
| 27-15 | Retail license suspension for sales to minors                            |  |
| 27-16 | Tobacco advertising and promotion targeting adolescents and young adults |  |
| 27-17 | Adolescent disapproval of smoking  |  |
| 27-18 | Tobacco control programs   |  |
| 27-19 | Preemptive tobacco control laws  |  |
| 27-20 | Tobacco product regulation   |  |
| 27-21 | Tobacco tax  |  |

## Healthy People 2010 Objectives

### Tobacco Use in Population Groups

#### 27-1. Reduce tobacco use by adults.

##### Target and baseline:

Objective	Reduction in Tobacco Use by Adults Aged 18 Years and Older	1998 Baseline*	2010 Target
		<i>Percent</i>	
<b>27-1a.</b>	Cigarette smoking	24	12
<b>27-1b.</b>	Spit tobacco	2.6	0.4
<b>27-1c.</b>	Cigars	2.5	1.2
<b>27-1d.</b>	Other products	Developmental	

\*Age adjusted to the year 2000 standard population.

**Target setting method:** Better than the best.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

NOTE: THE TABLE BELOW MAY CONTINUE TO THE FOLLOWING PAGE.

Adults Aged 18 Years and Older, 1998 (unless noted)	27-1a. Cigarette Smoking	27-1b. Spit Tobacco	27-1c. Cigars
	Percent		
<b>TOTAL</b>	24	2.6	2.5
<b>Race and ethnicity</b>			
American Indian or Alaska Native	35	DSU	DSU
Asian or Pacific Islander	13	DSU	DSU
Asian	13	DSU	DSU
Native Hawaiian and other Pacific Islander	17	DSU	DSU
Black or African American	25	1.1	1.9
White	25	2.9	2.6
Hispanic or Latino	19	0.5	1.3
Not Hispanic or Latino	25	2.8	2.6
Black or African American	25	1.1	1.9
White	25	3.2	2.8

Adults Aged 18 Years and Older, 1998 (unless noted)	27-1a. Cigarette Smoking	27-1b. Spit Tobacco	27-1c. Cigars
	Percent		
<b>Gender</b>			
Female	22	0.3	0.2
Male	26	4.9	4.9
<b>Family income level</b>			
Poor	34	3.0	2.2
Near poor	31	3.0	2.7
Middle/high income	21	2.6	2.6
<b>Education level (aged 25 years and older)</b>			
Less than high school	34	4.1	2.4
Less than 9 years	27	3.8	2.5
9 to 11 years	38	3.9	2.3
High school graduate	29	2.6	2.4
At least some college	17	1.7	2.7
13 to 15 years	24	2.2	2.7
16 years or more	11	1.2	2.6
<b>Disability status</b>			
Persons with disabilities	33 (1997)	DNA	DNA
Persons without disabilities	23 (1997)	DNA	DNA
<b>Sexual orientation</b>	DNC	DNC	DNC
<b>Select populations</b>			
Age groups (not age adjusted)			
18 to 24 years	28 (1997)	3.5 (1997)	2.2 (1997)
25 to 44 years	27 (1997)	3.2 (1997)	2.8 (1997)
45 to 64 years	25 (1997)	1.7 (1997)	3.0 (1997)
65 years and older	11 (1997)	1.8 (1997)	0.9 (1997)

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

Note: Age adjusted to the year 2000 standard population.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

## 27-2. Reduce tobacco use by adolescents.

### Target and baseline:

Objective	Reduction in Tobacco Use by Students in Grades 9 Through 12	1999 Baseline	2010 Target
		<i>Percent</i>	
<b>27-2a.</b>	Tobacco products (past month)	40	21
<b>27-2b.</b>	Cigarettes (past month)	35	16
<b>27-2c.</b>	Spit tobacco (past month)	8	1
<b>27-2d.</b>	Cigars (past month)	18	8

**Target setting method:** Better than the best.

**Data source:** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

NOTE: THE TABLE BELOW MAY CONTINUE TO THE FOLLOWING PAGE.

Students in Grades 9 Through 12, 1999 (unless noted)	Current Tobacco Use (used cigarettes, spit tobacco, or cigars on 1 or more of the 30 days preceding the survey)		
	27-2a. Both Genders	Females*	Males*
	Percent		
<b>TOTAL</b>	40	37	44
<b>Race and ethnicity</b>			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DSU	DSU	DSU
Native Hawaiian and other Pacific Islander	DSU	DSU	DSU
Black or African American	34	23	28
White	33	41	49
Hispanic or Latino	35	33	38
Not Hispanic or Latino	41	37	44
Black or African American	25	22	29
White	45	40	49

Students in Grades 9 Through 12, 1999 (unless noted)	Current Tobacco Use (used cigarettes, spit tobacco, or cigars on 1 or more of the 30 days preceding the survey)		
	27-2a. Both Genders	Females*	Males*
	Percent		
<b>Parents' education level</b>			
Less than high school	41 (1997)	36 (1997)	48 (1997)
High school graduate	46 (1997)	41 (1997)	51 (1997)
At least some college	43 (1997)	35 (1997)	48 (1997)
<b>Sexual orientation</b>	DNC	DNC	DNC
<b>Select populations</b>			
Grade			
9th grade	32	30	33
10th grade	40	38	42
11th grade	42	37	47
12th grade	50	43	57

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

\*Data for females and males are displayed to further characterize the issue.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

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Students in Grades 9 Through 12, 1999 (unless noted)	Current Cigarette Smoking (smoked cigarettes on 1 or more of the 30 days preceding the survey)		
	27-2b. Both Genders	Females*	Males*
	Percent		
<b>TOTAL</b>	35	35	35
<b>Race and ethnicity</b>			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DSU	DSU	DSU
Native Hawaiian and other Pacific Islander	DSU	DSU	DSU
Black or African American	20	19	22
White	39	40	38

Students in Grades 9 Through 12, 1999 (unless noted)	Current Cigarette Smoking (smoked cigarettes on 1 or more of the 30 days preceding the survey)		
	27-2b. Both Genders	Females*	Males*
	Percent		
Hispanic or Latino	33	32	34
Not Hispanic or Latino	35	35	35
Black or African American	20	18	22
White	39	39	38
<b>Parents' education level</b>			
Less than high school	39 (1997)	37 (1997)	43 (1997)
High school graduate	40 (1997)	39 (1997)	41 (1997)
At least some college	35 (1997)	33 (1997)	37 (1997)
<b>Sexual orientation</b>	DNC	DNC	DNC
<b>Selection populations</b>			
Grade			
9th grade	28	29	26
10th grade	35	36	34
11th grade	36	36	36
12th grade	43	41	46

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NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

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Students in Grades 9 Through 12, 1999 (unless noted)	Current Spit Tobacco Use (used spit tobacco on 1 or more of the 30 days preceding the survey)		
	27-2c. Both Genders	Females*	Males*
	Percent		
<b>TOTAL</b>	8	1	14
<b>Race and ethnicity</b>			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DSU	DSU	DSU
Native Hawaiian and other Pacific Islander	DSU	DSU	DSU

Students in Grades 9 Through 12, 1999 (unless noted)	Current Spit Tobacco Use (used spit tobacco on 1 or more of the 30 days preceding the survey)		
	27-2c. Both Genders	Females*	Males*
	Percent		
Black or African American	1	1	2
White	10	2	18
<b>Race and ethnicity</b>			
Hispanic or Latino	4	2	6
Not Hispanic or Latino	8	1	15
Black or African American	1	0	3
White	10	2	19
<b>Parents' education level</b>			
Less than high school	8 (1997)	1 (1997)	18 (1997)
High school graduate	9 (1997)	1 (1997)	17 (1997)
At least some college	10 (1997)	2 (1997)	16 (1997)
<b>Sexual orientation</b>	DNC	DNC	DNC
<b>Select populations</b>			
Grade			
9th grade	7	2	12
10th grade	7	1	13
11th grade	8	2	15
12th grade	9	1	17

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\*Data for females and males are displayed to further characterize the issue.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

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Students in Grades 9 Through 12, 1999 (unless noted)	Current Cigar Use (smoked cigars on 1 or more of the 30 days preceding the survey)		
	27-2d. Both Genders	Females*	Males*
	Percent		
<b>TOTAL</b>	18	10	25
<b>Race and ethnicity</b>			
American Indian or Alaska Native	DSU	DSU	DSU

Students in Grades 9 Through 12, 1999 (unless noted)	Current Cigar Use (smoked cigars on 1 or more of the 30 days preceding the survey)		
	27-2d. Both Genders	Females*	Males*
	Percent		
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DSU	DSU	DSU
Native Hawaiian and other Pacific Islander	DSU	DSU	DSU
Black or African American	14	13	16
White	19	9	29
<b>Hispanic or Latino</b>			
Hispanic or Latino	17	12	22
<b>Not Hispanic or Latino</b>			
Not Hispanic or Latino	18	10	26
<b>Black or African American</b>			
Black or African American	14	12	16
<b>White</b>			
White	19	9	28
<b>Parents' education level</b>			
Less than high school	19 (1997)	11 (1997)	29 (1997)
High school graduate	21 (1997)	11 (1997)	32 (1997)
At least some college	23 (1997)	11 (1997)	32 (1997)
<b>Sexual orientation</b>	DNC	DNC	DNC
<b>Select populations</b>			
<b>Grade</b>			
9th grade	14	9	18
10th grade	18	11	25
11th grade	18	9	27
12th grade	22	11	34

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\*Data for females and males are displayed to further characterize the issue.

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Effective prevention approaches for reducing tobacco use among adolescents include school-based prevention programs as an integral part of communitywide strategies that address the overall social context of tobacco use.<sup>20, 32</sup> School-based tobacco prevention programs identify the social influences that promote tobacco use among youth and teach skills to resist these influences. Such programs have demonstrated consistent and significant reductions or delays in adolescent smoking.<sup>20, 41</sup> The effects dissipate over time if they are not followed by additional educational interventions or linkages to community programs. Studies have shown



that the effectiveness of school-based tobacco prevention programs appears to be strengthened by (1) booster sessions or further application of the programs and (2) communitywide programs involving parents, school policies, mass media, youth access, and community organizations.<sup>42, 43, 44, 45, 46, 47</sup> A multicomponent approach to school-based tobacco use prevention<sup>48</sup> also may increase the long-term effectiveness of prevention efforts. (See Focus Area 7. Educational and Community-Based Programs.)

**27-3. (Developmental) Reduce the initiation of tobacco use among children and adolescents.**

**Potential data source:** National Household Survey on Drug Abuse (NHSDA), SAMHSA.

**27-4. Increase the average age of first use of tobacco products by adolescents and young adults.**

**Target and baseline:**

Objective	Increase in Average Age of First Tobacco Use	1997 Baseline	2010 Target
		Average Age of First Cigarette Use, in Years	
<b>27-4a.</b>	Adolescents aged 12 to 17 years	12	14
<b>27-4b.</b>	Young adults aged 18 to 25 years	15	17

**Target setting method:** Better than the best.

**Data source:** National Household Survey on Drug Abuse (NHSDA), SAMHSA.

NOTE: THE TABLE BELOW MAY CONTINUE TO THE FOLLOWING PAGE.

Adolescents and Young Adults, 1997	First Cigarette Use	
	27-4a. Aged 12 to 17 Years	27-4b. Aged 18 to 25 Years
	Average Age in Years	
<b>TOTAL*</b>	12	15
<b>Race and ethnicity</b>		
American Indian or Alaska Native	12	14
Asian or Pacific Islander	13	15
Black or African American	13	16
White	12	15
Hispanic or Latino	13	15

Adolescents and Young Adults, 1997	First Cigarette Use	
	27-4a. Aged 12 to 17 Years	27-4b. Aged 18 to 25 Years
	Average Age in Years	
Not Hispanic or Latino*	12	15
Black or African American	12	15
White	13	16
<b>Gender</b>		
Female	13	15
Male	12	15
<b>Family income level</b>		
Poor	DNA	DNA
Near poor	DNA	DNA
Middle/high income	DNA	DNA
<b>Sexual orientation</b>	DNC	DNC

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

\*Total for not Hispanic or Latino excludes all race categories other than black and white.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

Because tobacco use is linked with numerous adverse health outcomes, reducing tobacco use will reduce illness, disability, and death across a spectrum of conditions, including heart disease, cancer, and chronic lung disease. (See Related Objectives From Other Focus Areas section.)

Assessing the number of cases of tobacco use among both adults and adolescents is a critical element of public health surveillance. Indeed, in 1996 the Council of State and Territorial Epidemiologists added adult cigarette smoking as a notifiable condition, the first time that a behavior rather than a disease was designated a notifiable condition.<sup>49</sup>

Because the majority of initiation of tobacco use occurs in adolescence,<sup>20</sup> direct measures of tobacco use in adolescence are important health indicators. Measures of use in adulthood provide an assessment of use that has extended beyond experimentation and initiation. Evidence indicates substitution of tobacco products among both adults and youth, so measuring the use of multiple products (cigarettes, spit tobacco, and cigars at a minimum) is important.

## Cessation and Treatment

### 27-5. Increase smoking cessation attempts by adult smokers.

**Target:** 75 percent.

**Baseline:** 41 percent of adult smokers aged 18 years and older stopped smoking for 1 day or longer because they were trying to quit in 1998 (age adjusted to the year 2000 standard population).

**Target setting method:** Better than the best.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

NOTE: THE TABLE BELOW MAY CONTINUE TO THE FOLLOWING PAGE.

Adults Aged 18 Years and Older, 1998 (unless noted)	Stopped Smoking 1 Day or Longer Because They Were Trying To Quit
	Percent
<b>TOTAL</b>	41
<b>Race and ethnicity</b>	
American Indian or Alaska Native	42
Asian or Pacific Islander	44
Asian	38
Native Hawaiian and other Pacific Islander	DSU
Black or African American	45
White	40
Hispanic or Latino	38
Not Hispanic or Latino	41
Black or African American	45
White	40
<b>Gender</b>	
Female	42
Male	39
<b>Family income level</b>	
Poor	40
Near poor	42
Middle/high income	43
<b>Education level (aged 25 years and older)</b>	
Less than high school	38
Under 9 years	36

Adults Aged 18 Years and Older, 1998 (unless noted)	Stopped Smoking 1 Day or Longer Because They Were Trying To Quit
	Percent
9 to 11 years	39
High school graduate	36
At least some college	42
13 to 15 years	42
16 years or more	43
<b>Disability status</b>	
Persons with disabilities	44 (1997)
Persons without disabilities	42 (1997)
<b>Sexual orientation</b>	DNC
<b>Select populations</b>	
Age groups (not age adjusted)	
18 to 24 years	52
25 to 44 years	42
45 to 64 years	37
65 years and older	35

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

Note: Age adjusted to the year 2000 standard population.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

## 27-6. Increase smoking cessation during pregnancy.

**Target:** 30 percent.

**Baseline:** 14 percent of females aged 18 to 49 years stopped smoking during the first trimester of their pregnancy in 1998.

**Target setting method:** Better than the best.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

NOTE: THE TABLE BELOW MAY CONTINUE TO THE FOLLOWING PAGE.

Pregnant Females Aged 18 to 49 Years, 1998 (unless noted)	Stopped Smoking
	Percent
<b>TOTAL</b>	14
<b>Race and ethnicity</b>	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	DSU

Pregnant Females Aged 18 to 49 Years, 1998 (unless noted)	Stopped Smoking
	Percent
Asian	DSU
Native Hawaiian and other Pacific Islander	DSU
Black or African American	DSU
White	14
Hispanic or Latino	DSU
Not Hispanic or Latino	14
Black or African American	DSU
White	14
<b>Family income level</b>	
Poor	DSU
Near poor	12
Middle/high income	22
<b>Education level</b>	
Less than 12 years	DSU
Less than 9 years	DSU
9 to 11 years	DSU
High school graduate	14
13 years or more	12
13 to 15 years	10
16 years or more	DSU
<b>Disability status</b>	
Persons with activity limitations	DSU (1991)
Persons without activity limitations	12 (1991)

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

## 27-7. Increase tobacco use cessation attempts by adolescent smokers.

**Target:** 84 percent.

**Baseline:** 76 percent of ever-daily smokers in grades 9 through 12 had tried to quit smoking in 1999.

**Target setting method:** Better than the best.

**Data source:** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

Students in Grades 9 Through 12 Who Were Ever Daily Smokers (Ever Smoked Every Day for 30 Days), 1999 (unless noted)	Tried To Quit		
	27-7. Both Genders	Females*	Males*
	Percent		
<b>TOTAL</b>	76	81	71
<b>Race and ethnicity</b>			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DNC	DNC	DNC
Native Hawaiian and other Pacific Islander	DNC	DNC	DNC
Black or African American	81	82	80
White	76	80	72
<b>Hispanic or Latino</b>			
Hispanic or Latino	72	75	69
<b>Not Hispanic or Latino</b>			
Black or African American	80	80	79
White	76	79	73
<b>Parents' education level</b>			
Less than high school	69 (1997)	81 (1997)	57 (1997)
High school graduate	79 (1997)	82 (1997)	76 (1997)
At least some college	72 (1997)	76 (1997)	69 (1997)
<b>Sexual orientation</b>	DNC	DNC	DNC
<b>Select populations</b>			
<b>Grade</b>			
9th grade	72	74	69
10th grade	81	84	78
11th grade	74	79	67
12th grade	78	85	73

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

\*Data for females and males are displayed to further characterize the issue.

## 27-8. Increase insurance coverage of evidence-based treatment for nicotine dependency.

### Target and baseline:

Objective	Increase in Insurance Coverage of Evidence-Based Treatment for Nicotine Dependency	1998 Baseline (unless noted)	2010 Target
		<i>Percent</i>	
<b>27-8a.</b>	Managed care organizations	75 (1997–98)	100
		<i>Number</i>	
<b>27-8b.</b>	Medicaid programs in States and the District of Columbia	24	51
<b>27-8c.</b>	All insurance	Developmental	

**Target setting method:** Total coverage of FDA-approved pharmacotherapies and behavioral therapies.

**Data sources:** Addressing Tobacco in Managed Care Survey, Robert Wood Johnson Foundation; (Medicaid data) Health Policy Tracking Service, National Conference of State Legislators.

Nearly 70 percent of current smokers want to quit smoking, and approximately 45 percent have quit smoking for at least 1 day because they were trying to quit.<sup>19</sup> However, only about 2.5 percent of current smokers stop smoking permanently each year.<sup>24</sup> Smoking cessation has major and immediate health benefits for men and women of all ages. For example, people who quit smoking before age 50 years have half the risk of dying in the next 15 years compared with people who continue to smoke.<sup>2</sup>

In 1996, the Agency for Health Care Policy and Research (AHCPR, now the Agency for Healthcare Research and Quality) sponsored an expert panel that produced an evidence-based guideline that evaluated smoking cessation interventions available at the time and concluded that the efficacy of intervention increases with intensity.<sup>50</sup> The results clearly showed that a variety of smoking cessation interventions are effective: (1) simple advice to quit by a clinician (30 percent increase in cessation), (2) individual and group counseling (doubles cessation rates), (3) telephone hotlines and helplines (40 percent increase in cessation), and (4) nicotine replacement therapy (up to double the cessation rates). This guideline will be updated in 2000.

AHCPR's guideline recommended that smoking cessation treatments (both pharmacotherapy and counseling) be provided as paid services and that providers be reimbursed for delivering effective smoking cessation interventions. AHCPR concluded that effective reduction of tobacco use will require health care systems to make institutional changes resulting in systematic identification of, and intervention with, all tobacco users at every visit.<sup>50</sup>

Almost 44 percent of high school seniors who smoke report that they would like to stop smoking. About 30 percent of high school seniors who smoke report that they have tried to stop smoking but failed to do so.<sup>51</sup> Although many teen smokers want to quit or have tried to quit smoking, almost no proven interventions exist for tobacco use cessation among teenagers. Research is under way to assess effective cessation methods for young persons, but expanded research efforts are needed.

Data reported from a study of managed care organizations indicated that 75 percent of plans either partially or fully covered one or more smoking cessation interventions. Full coverage was provided most often for self-help materials and smoking cessation classes, whereas more costly interventions, such as pharmaceutical treatments for nicotine addiction, were less frequently covered in full.<sup>52</sup> According to other data, Medicaid coverage of smoking cessation services, including counseling and nicotine replacement therapies, varied by State.<sup>53</sup> (See Focus Area 1. Access to Quality Health Services.)

## Exposure to Secondhand Smoke

### 27-9. Reduce the proportion of children who are regularly exposed to tobacco smoke at home.

**Target:** 10 percent.

**Baseline:** 27 percent of children aged 6 years and under lived in a household where someone smoked inside the house at least 4 days per week in 1994.

**Target setting method:** Better than the best.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

NOTE: THE TABLE BELOW MAY CONTINUE TO THE FOLLOWING PAGE.

Children Aged 6 Years and Under, 1994	Lived in Household Where Someone Smoked Inside the House at Least 4 Days a Week
	Percent
<b>TOTAL</b>	27
<b>Race and ethnicity</b>	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	23
Asian	DSU
Native Hawaiian and other Pacific Islander	DSU
Black or African American	28
White	27



Children Aged 6 Years and Under, 1994	Lived in Household Where Someone Smoked Inside the House at Least 4 Days a Week
	Percent
Hispanic or Latino	20
Not Hispanic or Latino	29
Black or African American	28
White	29
<b>Gender</b>	
Female	28
Male	27
<b>Family income</b>	
Poor	38
Near poor	33
Middle/high income	19

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

## 27-10. Reduce the proportion of nonsmokers exposed to environmental tobacco smoke.

**Target:** 45 percent.

**Baseline:** 65 percent of nonsmokers aged 4 years and older had a serum cotinine level above 0.10 ng/mL in 1988–94 (age adjusted to the year 2000 standard population).

**Target setting method:** Better than the best.

**Data source:** National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

Nonsmokers Aged 4 Years and Older, 1988–94	Serum Cotinine Levels >0.10 ng/mL
	Percent
<b>TOTAL</b>	65
<b>Race and ethnicity</b>	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	DSU
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	81
White	63
<b>Hispanic or Latino</b>	
Hispanic or Latino	DSU
Mexican American	53
Not Hispanic or Latino	66
Black or African American	81
White	63
<b>Gender</b>	
Female	61
Male	69
<b>Education level (aged 25 years and older)</b>	
Less than high school	71
High school graduate	67
At least some college	55
<b>Sexual orientation</b>	DNC
<b>Select populations</b>	
Age groups (not age adjusted)	
4 to 11 years	68
12 to 19 years	69
20 to 44 years	67
45 to 64 years	65
65 years and older	51

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.  
Note: Age adjusted to the year 2000 standard population.

**27-11. Increase smoke-free and tobacco-free environments in schools, including all school facilities, property, vehicles, and school events.**

**Target:** 100 percent.

**Baseline:** 37 percent of middle, junior high, and senior high schools were smoke-free and tobacco-free in 1994.

**Target setting method:** Retain year 2000 target.

**Data source:** School Health Policies and Programs Study (SHPPS), CDC, NCCDPHP.

**27-12. Increase the proportion of worksites with formal smoking policies that prohibit smoking or limit it to separately ventilated areas.**

**Target:** 100 percent.

**Baseline:** 79 percent of worksites with 50 or more employees had formal smoking policies that prohibited or limited smoking to separately ventilated areas in 1998–99.

**Target setting method:** Retain year 2000 target.

**Data source:** National Worksite Health Promotion Survey, Association for Worksite Health Promotion (AWHP).

**27-13. Establish laws on smoke-free indoor air that prohibit smoking or limit it to separately ventilated areas in public places and worksites.**

**Target and baseline:**

Objective	Jurisdictions With Laws on Smoke-Free Air	1998 Baseline	2010 Target
		<i>Number</i>	
	<b>States and the District of Columbia</b>		
<b>27-13a.</b>	Private workplaces	1	51
<b>27-13b.</b>	Public workplaces	13	51
<b>27-13c.</b>	Restaurants	3	51
<b>27-13d.</b>	Public transportation	16	51
<b>27-13e.</b>	Day care centers	22	51
<b>27-13f.</b>	Retail stores	4	51
<b>27-13g.</b>	<b>Tribes</b>	Developmental	
<b>27-13h.</b>	<b>Territories</b>	Developmental	

**Target setting method:** Retain year 2000 target.

**Data source:** State Tobacco Activities Tracking and Evaluation System (STATE System), CDC, NCCDPHP, OSH.

In 1996, only 37 percent of adult nontobacco users were aware enough of their exposure to report having been exposed to secondhand smoke either at home or at work.<sup>17</sup> Both home and workplace environments contributed significantly to widespread exposure to secondhand smoke in the United States.<sup>17</sup> An alarming level of secondhand smoke exposure at home was reported. Exposure ranged from 12 percent of children aged 17 years and under in Utah to 34 percent of children in Kentucky.<sup>18</sup>

A 1992–93 National Cancer Institute survey found that significant numbers of workers, especially those in blue-collar and service occupations, reported smoke-free workplace policy rates considerably lower than the overall rate of 46 percent.<sup>54</sup> Least likely to have a smoke-free policy were food service workers—waiters, waitresses, cooks, bartenders, and counter help. Of these 5.5 million workers, 22 percent were teenagers. In a 1993 study, food service workers were estimated to have a 50 percent increased risk of dying from lung cancer compared to the general population, with the higher risk attributed in part to their workplace exposure to secondhand smoke.<sup>55</sup>

Policy, educational, and clinical interventions can reduce secondhand smoke exposure among the population. Policy approaches include the voluntary adoption of worksite restrictions, enactment of clean indoor air laws, and enforcement of restrictions. Public education campaigns and local community efforts to limit smoking in public places in California and Massachusetts have been associated with reported reductions in the exposure of both adults and children to secondhand smoke.<sup>33, 34</sup>

A study published in 1996 concluded that a portion of children’s respiratory diseases and their associated illness may be prevented by decreasing or eliminating their exposure to secondhand smoke.<sup>56</sup>

Another study concluded that secondhand smoke exposure worsens asthma and each year leads to 500,000 visits to physicians by children.<sup>57</sup> The American Academy of Pediatrics has recommended that pediatricians inform parents about the health hazards of secondhand smoke and provide guidance on smoking cessation.<sup>58</sup> (See Focus Area 8. Environmental Health and Focus Area 24. Respiratory Diseases.)

## Social and Environmental Changes

### **27-14. Reduce the illegal sales rate to minors through enforcement of laws prohibiting the sale of tobacco products to minors.**

#### **Target and baseline:**

Objective	Jurisdictions With a 5 Percent or Less Illegal Sales Rate to Minors	1998 Baseline	2010 Target
		<i>Number</i>	
<b>27-14a.</b>	States and the District of Columbia	0	51
<b>27-14b.</b>	Territories	0	All

**Target setting method:** Based on published literature and expert opinion.

**Data source:** State Synar Enforcement Reporting, SAMHSA, CSAP.

### **27-15. Increase the number of States and the District of Columbia that suspend or revoke State retail licenses for violations of laws prohibiting the sale of tobacco to minors.**

**Target:** All States and the District of Columbia.

**Baseline:** 34 States with some form of retail licensure could suspend or revoke the license for violation of minors' access laws in 1998.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System (STATE System), CDC, NCCDPHP, OSH.

Restricting minors' access to tobacco products is one core element in a comprehensive approach to tobacco use prevention. In 1997, of the 30 percent of students who purchased their cigarettes from a gas station or store in the month preceding a survey, 67 percent of them were not asked for proof of age.<sup>59</sup> Earlier data indicated that only about half of smokers aged 12 to 17 years were ever asked to show proof of age when they tried to purchase cigarettes.<sup>60</sup> Data revealed that self-service tobacco displays make it easier for minors to purchase or steal tobacco products. In a 1995 survey, stores with self-service displays were 61 percent more likely to sell tobacco to minors than stores without self-service displays.<sup>61</sup>

Although all States prohibit the sale of tobacco products to minors, enforcement of laws has been limited until recent years. States and localities have undertaken a number of measures to reduce minors' access, including policy establishment, retail licensure, enforcement activities, compliance checks, retailer education, and youth involvement. State restrictions on tobacco vending machines vary, with the most stringent restrictions banning vending machines except in areas inaccessible

to minors. Not all States have retail licensure systems. Among those that do, not all will suspend or revoke licenses for violation of State minors' access laws. Federal policy initiatives require the active participation of State and local communities to ensure effective implementation.<sup>35, 62</sup> In addition to efforts to address the purchase of tobacco products by minors, tobacco control initiatives also must target social sources of tobacco for young people, including friends, siblings, and parents.

**27-16. (Developmental) Eliminate tobacco advertising and promotions that influence adolescents and young adults.**

**Potential data source:** American Legacy Foundation and National Association of Attorneys General.

**27-17. Increase adolescents' disapproval of smoking.**

**Target and baseline:**

Objective	Increase in Adolescents' Disapproval of Smoking	1998 Baseline	2010 Target
		<i>Percent</i>	
<b>27-17a.</b>	8th grade	80	95
<b>27-17b.</b>	10th grade	75	95
<b>27-17c.</b>	12th grade	69	95

**Target setting method:** Retain year 2000 target.

**Data source:** Monitoring the Future Study (MTF), NIH, NIDA.

NOTE: THE TABLE BELOW MAY CONTINUE TO THE FOLLOWING PAGE.

Adolescents, 1998	Disapproval of Smoking One or More Packs of Cigarettes Daily		
	27-17a. 8th Graders	27-17b. 10th Graders	27-17c. 12th Graders
	Percent		
<b>TOTAL</b>	80	75	69
<b>Race and ethnicity</b>			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DNC	DNC	DNC
Asian	DSU	DSU	DSU
Native Hawaiian and other Pacific Islander	DNC	DNC	DNC
Black or African American	DNC	DNC	DNC
White	DNC	DNC	DNC

Adolescents, 1998	Disapproval of Smoking One or More Packs of Cigarettes Daily		
	27-17a. 8th Graders	27-17b. 10th Graders	27-17c. 12th Graders
	Percent		
Hispanic or Latino	76	81	76
Not Hispanic or Latino	DNC	DNC	DNC
Black or African American	82	83	82
White	81	72	64
<b>Gender</b>			
Female	83	79	73
Male	77	72	64
<b>Parents' education level</b>			
Less than high school	DNC	DNC	DNC
High school graduate	DNC	DNC	DNC
At least some college	DNC	DNC	DNC
<b>Sexual orientation</b>	DNC	DNC	DNC

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

NOTE: THE TABLE ABOVE MAY HAVE CONTINUED FROM THE PREVIOUS PAGE.

Attitudes of adolescents regarding the acceptability of tobacco use provide an indication of their susceptibility to tobacco use.<sup>20</sup> The 1994 Surgeon General's report on tobacco concluded that the following are all risk factors for tobacco use among adolescents: adolescents' perceptions that tobacco use is the norm, peers' and siblings' approval of tobacco use, and the belief that tobacco use provides benefits. The report further concluded that for spit tobacco use, insufficient knowledge among youth of the health effects also is a factor.<sup>20</sup>

**27-18. (Developmental) Increase the number of Tribes, Territories, and States and the District of Columbia with comprehensive, evidence-based tobacco control programs.**

**Potential data sources:** State Tobacco Activities Tracking and Evaluation System (STATE System), CDC, NCCDPHP, OSH; IHS.

Evidence indicates that comprehensive tobacco control programs are effective. Investments in such programs to date, however, have been seriously limited. Data from California and Massachusetts indicate that the ability to sustain reductions in per capita consumption due to excise tax increases is greater when the tax increase is combined with a comprehensive tobacco control program. Per capita cigarette

consumption in California and Massachusetts, two States with such programs, has declined two to three times faster than in the rest of the Nation. In addition, the rapid rise in youth smoking rates experienced nationwide was slowed in both California and Massachusetts as a result of the combined effects of a tax increase and a strong tobacco control program.<sup>38</sup> Other analyses suggest that comprehensive programs, including media campaigns, have reduced the rate of increase in youth smoking in States with programs funded by excise taxes (such as Massachusetts), compared with the rest of the Nation.<sup>63</sup>

In the Minnesota Heart Health Program, smoking rates were reduced by approximately 40 percent in the intervention community with a combined school-based curriculum, community-based activities, and mass media interventions.<sup>46</sup> Furthermore, a preliminary report on the effectiveness of the American Stop Smoking Intervention Study (ASSIST) indicated that in 1993–94, per capita cigarette consumption was 7 percent less in the 17 ASSIST States than in the remaining States (excluding California).<sup>64</sup>

Limiting the appeal of tobacco products to young people involves both restricting tobacco advertising and promotions and countering the ability of pro-tobacco messages to reach large segments of the population quickly and efficiently. Because of their appeal, the mass media can serve as a powerful tool for tobacco control. Television and radio stations, magazines, and other media can deliver information and educational messages directly to targeted audiences, build public support for tobacco control programs and policies, reinforce social norms supporting the nonuse of tobacco, and counteract the pro-use messages and images of tobacco marketing and public relations campaigns.

An essential element in programs for reducing tobacco's appeal to youth is to change the current social environment that reinforces the acceptability of tobacco use.<sup>20, 32, 40</sup> This change requires strategies to counter the billions of dollars worth of tobacco advertising and promotion that bombard young people with false and misleading messages and images about tobacco.<sup>20, 32</sup> An integral part of the Arizona, California, and Massachusetts tobacco control programs has been paid counteradvertising campaigns to deglamorize and denormalize tobacco use, especially among young people, with unequivocal messages about the negative effects of tobacco use on health, performance, and appearance.<sup>33, 34, 36, 37</sup> Preliminary results indicate that the media programs have reached youth, adults, and multicultural populations in those States and have achieved their program objectives.

## **27-19. Eliminate laws that preempt stronger tobacco control laws.**

**Target:** Zero States.

**Baseline:** 30 States had preemptive tobacco control laws in the areas of clean indoor air, minors' access laws, or marketing in 1998.

**Target setting method:** Retain year 2000 target.



**Data source:** State Tobacco Activities Tracking and Evaluation System (STATE System), CDC, NCCDPHP, OSH.

Preemptive State laws limit the ability of State and local programs to address major areas of tobacco control, in particular smoke-free indoor air and minors' access policies. A preemptive State tobacco control law prevents local jurisdictions from enacting restrictions that are more restrictive than or vary from State law. The tobacco industry attempts to promote such laws as health promotion efforts that ensure a uniform set of restrictions for all communities. Such laws, however, usually afford less protection and prevent local governments from adopting more restrictive provisions in the future.<sup>65</sup> Preemptive laws have led, for example, to weaker public health standards, loss of community education involved in the passage of local ordinances, more difficulty with enforcement at the local level, and lower compliance with the laws.<sup>66, 67</sup> Several national organizations have expressed opposition to the enactment of preemptive laws, including the American Public Health Association, the Institute of Medicine, and a working group of State attorneys general.

## **27-20. (Developmental) Reduce the toxicity of tobacco products by establishing a regulatory structure to monitor toxicity.**

**Potential data source:** FDA.

Over the past several years, new technology and the increasing availability of alternative forms of nicotine delivery have prompted discussion of a “harm reduction” approach to tobacco control. Part of this discussion has focused on making tobacco products safer, while acknowledging that there is no such thing as a “safe cigarette.” Approaches proposed and debated include the reduction of tar and nicotine levels in tobacco products, the reduction of tobacco-specific nitrosamines, and the reduction of specific additives in tobacco products.

Issues raised by products or technologies that purport to reduce risk require the establishment of an appropriate scientific and regulatory framework within the Federal Government. Much work needs to be done before scientific and regulatory agencies are in a position to evaluate the issues raised by these technologies and to inform the public about risks.

A framework also is needed to ensure that the ongoing activities of Federal agencies, such as the collection of information about tobacco product ingredients and the establishment of protocols for measuring tar and nicotine yields, better serve public health needs. For example, an inadequate method for testing tar and nicotine yields has led to inaccurate information about the tar and nicotine smokers actually receive and a misperception among smokers about the safety of so-called low-tar cigarettes.<sup>68</sup> In addition, information provided by tobacco companies about additives in tobacco products is protected from release to the public.<sup>69</sup>

## 27-21. Increase the average Federal and State tax on tobacco products.

### Target and baseline:

Objective	Increase in Combined Federal and Average State Tax	1998 Baseline	2010 Target
<b>27-21a.</b>	Cigarettes	\$0.63*	\$2
<b>27-21b.</b>	Spit tobacco	Developmental <sup>†</sup>	

\*24 cent Federal tax; 38.9 cent average State tax in 1998.

<sup>†</sup>2.7 cent Federal tax in 1999; 7 States and the District of Columbia did not tax smokeless tobacco products in 1999.

**Target setting method:** Expert opinion; comparison to international tax rates.

**Data source:** The Tax Burden on Tobacco, The Tobacco Institute.

As with almost all consumer products, the demand for cigarettes decreases as price increases. An increase in the excise tax on tobacco products would reduce rates of use of both cigarettes and spit tobacco among adults and youth. Economists agree that a 10 percent increase in the price of cigarettes will reduce overall smoking among adults by approximately 4 percent.<sup>63, 70</sup> Data suggest that the prevention effect on youth would be at least as large if not larger.<sup>63, 70</sup>

Likewise, increasing the tax on smokeless tobacco products would reduce demand. Economists have found that a 10 percent increase in the price of spit tobacco products will decrease male youth demand by 5.9 percent.<sup>71</sup>

A 1989 report predicted that for every 10 percent increase in the price of cigarettes, there would be a 7.6 to 12 percent decrease in teen smoking participation rates (that is, whether teens smoke at all).<sup>72</sup> The report concluded that among teens, smoking participation responds more strongly to price than does the amount of daily cigarette consumption. Studies conducted since the release of this report reinforce and support these conclusions.<sup>63, 70, 71</sup> Data also indicate that earmarking funds from an excise tax increase for tobacco prevention and control programs increases both public support for the proposed tax and the public health impact of the price increase.<sup>38, 73</sup>

## Related Objectives From Other Focus Areas

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### 1. Access to Quality Health Services

- 1-2. Health insurance coverage for clinical preventive services
- 1-3. Counseling about health behaviors

### 3. Cancer

- 3-1. Overall cancer deaths
- 3-2. Lung cancer deaths

- 3-4. Cervical cancer deaths
- 3-6. Oropharyngeal cancer deaths
- 7. Educational and Community-Based Programs**
  - 7-5. Worksite health promotion programs
  - 7-6. Participation in employer-sponsored health promotion activities
  - 7-10. Community health promotion programs
  - 7-11. Culturally appropriate and linguistically competent community health promotion programs
  - 7-12. Older adult participation in community health promotion activities
- 8. Environmental Health**
  - 8-18. Homes tested for radon
  - 8-19. Radon-resistant new home construction
  - 8-29. Global burden of disease
- 12. Heart Disease and Stroke**
  - 12-1. Coronary heart disease (CHD) deaths
  - 12-7. Stroke deaths
- 16. Maternal, Infant, and Child Health**
  - 16-1. Fetal and infant deaths
  - 16-6. Prenatal care
  - 16-10. Low birth weight and very low birth weight
  - 16-11. Preterm births
  - 16-17. Prenatal substance exposure
- 21. Oral Health**
  - 21-6. Early detection of oral and pharyngeal cancers
  - 21-7. Annual examinations for oral and pharyngeal cancers
- 23. Public Health Infrastructure**
  - 23-4. Data for all population groups
  - 23-5. Data for Leading Health Indicators, Health Status Indicators, and Priority Data Needs at Tribal, State, and local levels
- 24. Respiratory Diseases**
  - 24-1. Deaths from asthma
  - 24-2. Hospitalizations for asthma
  - 24-3. Hospital emergency department visits for asthma
- 26. Substance Abuse**
  - 26-9. Substance-free youth
  - 26-16. Peer disapproval of substance abuse
  - 26-17. Perception of risk associated with substance abuse

## Terminology

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(A listing of abbreviations and acronyms used in this publication appears in Appendix H.)

**Consumption:** The amount of tobacco products consumed or used by the population. Consumption usually is measured in units, such as the number of cigarettes smoked or pounds of spit tobacco used over a given period of time.

**Counteradvertising:** The placement of pro-health advertisements on TV, on radio, in print, on billboards, on movie trailers, on the Internet, and in other media.

**Illegal buy rate:** Rate of illegal sales to minors in compliance checks to assess adherence to minors' tobacco access laws.

**Nicotine dependency:** Highly controlled or compulsive use, use despite harmful effects, withdrawal upon cessation of use, and recurrent drug craving.

**Notifiable condition:** A disease or risk factor that is reported to the Centers for Disease Control and Prevention by the States and the District of Columbia.

**Pharmacotherapy:** Medical treatment using pharmaceuticals or drugs.

**Preemptive laws:** Legislation prohibiting any local jurisdiction from enacting restrictions more stringent than State law or restrictions that may vary from State law.

**Secondhand smoke:** A mixture of the smoke exhaled by smokers and the smoke that comes from the burning end of the tobacco product.

**Serum cotinine:** A biological marker for tobacco use and exposure to environmental tobacco smoke measured in the blood. Cotinine is a breakdown product of nicotine.

**Spit tobacco:** Chewing tobacco, snuff, or smokeless tobacco.

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