

received healthy lifestyle advice by mail and by worksite posters. Men in the intervention sites found at baseline to be at high risk for cardiovascular disease were provided medical counseling on risk factor change, including smoking cessation. At the end of the intervention in 1977–1978, a small but significant reduction in smoking prevalence had occurred among the high-risk smokers in the intervention site (Rose et al. 1980). Five intervention and five control worksites were resurveyed in 1983, approximately 12 years after the baseline screening and at least 5 years after the end of the intervention program (Bauer et al. 1985). There was no significant difference in the prevalence of smoking between intervention and control factories, but the smokers at the intervention sites reported smoking significantly fewer cigarettes per day.

The initial design and implementation of the North Karelia and Stanford Three-Community trials led to the design of several other cardiovascular disease prevention trials around the world. These included the Swiss National Research Program from 1977 to 1980 (Gutzwiller et al. 1985), the South African Coronary Risk Factor Study from 1979 to 1984 (Steenkamp et al. 1991), and the Australian North Coast Healthy Lifestyle Programme from 1978 to 1980 (Egger et al. 1983). The early trials also influenced the development of two communitywide mass media-based smoking cessation trials implemented in Australia in the 1980s, in Sydney from 1983 to 1986 and in Melbourne from 1984 to 1986 (Pierce et al. 1986, 1990; Macaskill et al. 1992).

In the Swiss trial, two towns in the French-speaking and two towns in the German-speaking regions of the country were assigned to either intervention or reference status (Gutzwiller et al. 1985). Baseline surveys of risk factors for cardiovascular disease were conducted among random samples of residents aged 16 to 69 years in all four towns in 1977–1978 and repeated at the final assessments in 1980–1981. In the interval, communitywide health education and health promotion interventions were conducted in the two intervention towns, including media campaigns, counseling of high-risk individuals, and community organization efforts to encourage environmental and social changes. The prevalence of smoking in the communities declined from 32.8 to 27.4 percent in the intervention towns and from 37.1 to 35.3 percent in the reference towns, a significant net effect of 3.6 percent decline.

In the South African Coronary Risk Factor Study, three rural communities, matched in size, socioeconomic status, and cultural factors, were assigned to low-intensity prevention, high-intensity prevention, and control status (Steenkamp et al. 1991). Both

the low- and the high-intensity sites received a mass media educational campaign using so-called small media, such as posters, billboards, mailings, and coverage in local newspapers. In the high-intensity community, high-risk individuals, including smokers, received personal interventions from health care providers. Risk factors for cardiovascular disease were measured in a cohort of residents aged 15 to 64 years from each community in 1979 and in 1983. The baseline prevalence of smoking was higher among men (49.2 vs. 44.4 percent) and women (17.0 vs. 14.5 percent) in the high-intensity intervention community than in the control community, but the difference was not statistically significant. After the four-year intervention, the net change in smoking prevalence in the high-intensity community, relative to the control community, was not significant for men but was significant for women. Women in both the low- and the high-intensity intervention communities had significantly higher rates of quitting than women in the control community, but no differences were observed for men.

The Australian North Coast Healthy Lifestyle Programme replicated the design of the Stanford Three-Community Study (Egger et al. 1983). In 1978, three communities in northern New South Wales, Australia, were assigned to a media intervention, media intervention plus community program, or control status. A two-year study for preventing cardiovascular disease was conducted, including a smoking cessation component called “Quit for Life.” The media interventions used professional commercial media and advertising techniques and a social marketing and health promotion framework involving print, posters, radio, television, and other advertising techniques. The community programs for smoking cessation included promotions of smoking cessation organizations, kits handed out by doctors, distribution of self-help materials, and telephone help lines. The smoking cessation campaigns also incorporated other community activities—such as organized runs, stress management training, and computerized health testing—that conveyed the overall program’s broader theme of healthy lifestyles. Risk factors for cardiovascular disease, including smoking, were measured in random samples of residents aged 18 years and older in each community in 1978 (baseline), 1980, and 1981. In the multiple logistic regression analysis model, which controlled for baseline differences among the three communities in age and sex distributions, there was a statistically greater decline in smoking in the two intervention communities than in the comparison community, with the largest differences among young smokers. Declines in the prevalence of smoking in the area assigned to

media intervention plus community program ranged from 15.7 percent among men aged 18–25 years to 6.1 percent among women aged 65 years and older.

In the 1980s, a communitywide mass media-based smoking cessation campaign was conducted in Sydney and Melbourne, Australia (Dwyer et al. 1986; Pierce et al. 1986). The Sydney campaign began in mid-1983, and the Melbourne campaign began one year later (during the preceding year, Melbourne was used as a control city for the Sydney campaign). The “Quit for Life” campaigns involved innovative and provocative smoking cessation messages delivered through paid spots on the radio, on television, and in newspapers. These messages were supported by a telephone “Quit Line,” self-help “Quit Kits,” and a hospital-based “Quit Centre,” all of which were promoted at the end of the paid advertisements used in the campaigns. The campaigns were evaluated through monthly random telephone surveys in the two communities. In addition, a cohort of residents was interviewed in April–June 1983 and again in May 1984. In the cohort, 23 percent of smokers in Sydney and 9 percent in Melbourne quit during the initial (control) year before the campaign was begun in Melbourne (Pierce et al. 1986). The monthly prevalence estimates demonstrated an approximately 1-percent decline in Sydney in comparison with the rest of Australia (Dwyer et al. 1986). The media campaigns were continued through 1986, along with additional programs in conjunction with physician-, school-, and community-based activities. Long-term evaluation of trends in smoking in the two cities from 1981 to 1987 suggests that the sustained campaigns may have contributed to a decline in smoking prevalence of about 1.5 percentage points per year in both communities among men but had little impact on women (Pierce et al. 1990). An analysis of the campaign’s potential differential impact across educational levels suggested that the Australian mass media and community campaigns did not contribute to an increase in the gap in smoking prevalence between educational groups (Pierce 1989; Macaskill et al. 1992).

The lack of a consistently positive effect from these initial community trials was attributed more to an incomplete understanding of comprehensive interventions and to the relatively weak, quasi-experimental designs of the studies than to concern about the efficacy of the overall approach (Farquhar 1978). The continuing enthusiasm for the potential efficacy of the communitywide approach was reflected in both national and international reviews and guidelines (Blackburn 1983; WHO 1982; USDHHS 1983; National Cholesterol Education Program Expert Panel 1988; Shea and Basch 1990a,b). Similarly, the positive results

from the Australian communitywide antismoking media campaigns and smoking cessation data from the North Karelia trial encouraged the planning of smoking-specific community efforts in the United States in the late 1980s.

Three major community-based trials for preventing cardiovascular disease were funded by the National Heart, Lung, and Blood Institute (NHLBI) in the early 1980s: the Stanford Five-City Project, the Minnesota Heart Health Program, and the Pawtucket Heart Health Program. Each had comparison and intervention communities and stronger designs and evaluation methodologies than the studies initiated in the 1970s. Each study was developed by an independent team of investigators, and the NHLBI maintained a collaborative research relationship among the studies (Winkleby et al. 1997). All three shared common intervention approaches that lasted five to eight years and focused on the major risk factors for cardiovascular disease (hypertension, cigarette smoking, high dietary fat, obesity, and sedentary lifestyle). Each project used mass media, community mobilization, and multiple educational channels, such as health care providers, schools, worksites, and voluntary agencies. The programs integrated individual and social change approaches, employing some combination of social learning theory, social network diffusion theory, and social marketing to guide the planning and implementation of the interventions (Bandura 1977; McGuire 1973; Rothman 1979; Rogers 1983). The three projects differed initially in their relative emphasis on specific modalities (Stanford emphasized media; Minnesota, population screening; and Pawtucket, community organizations) (Shea and Basch 1990a), but frequent collaborations among projects decreased these differences over time. Many innovative strategies were developed, and the process evaluations on specific smoking prevention and cessation interventions were positive (Glasgow et al. 1985; Sallis et al. 1985; Altman et al. 1987; Elder et al. 1987, 1993; King et al. 1987; Lando et al. 1990, 1991; Perry et al. 1992; Pechacek et al. 1994). Nonetheless, the overall impact of the three interventions on smoking prevalence was modest.

The Stanford Five-City Project began with baseline surveys in 1979. Five cities in Northern California were selected on the basis of location, size, and media markets (Farquhar et al. 1985). Monterey and Salinas shared a media market and were assigned to the intervention group. The three control cities (Modesto, San Luis Obispo, and Santa Maria) were isolated from the media market of the intervention communities. The communitywide educational campaigns began in 1980 in collaboration with existing community

organizations. The two treatment cities received continual exposure for five years; each year, four to five separate risk factor education campaigns took place, one of which focused on smoking. Evaluations included independent, cross-sectional population samples aged 25 to 74 years surveyed at baseline and at 25, 51, and 73 months, as well as a cohort formed from the baseline survey that was resurveyed at 17, 39, and 60 months. Initially, the cohort samples in the intervention communities experienced a significantly greater decline in smoking prevalence than those in the control communities (-7.66 vs. -3.76 percent) (Farquhar et al. 1990; Fortmann et al. 1993). By the end of the intervention in 1986, the cross-sectional surveys showed no such difference in declining prevalence. At the final follow-up in 1989-1990, a more rapid though nonsignificant decline was detected in the control communities than in the intervention communities (Winkleby et al. 1996).

In the Minnesota Heart Health Project, three pairs of communities were selected, with one of each pair assigned to educational intervention and the other to comparison status (Jacobs et al. 1986; Murray et al. 1994). The communities were matched on size, community type, and distance from the Minneapolis-St. Paul metropolitan area. After a 16-month baseline assessment period, a 5- to 6-year intervention program was started in November 1981 in the first education site, Mankato, Minnesota (Luepker et al. 1994). The second and third education sites, Fargo-Moorhead on the North Dakota-Minnesota border and Bloomington, Minnesota, were started 22 and 28 months later in 1983. The staggered entry allowed for a gradual development of the intervention program and a stronger evaluation design (Luepker et al. 1994). Starting in 1980, annual cross-sectional surveys among residents aged 25 to 74 years were conducted in all six sites. A random sample of residents surveyed before the start of the education program was resurveyed. For long-term smoking cessation, the cross-sectional survey data provided evidence of an intervention effect for women but not for men; no such effect was observed for either sex in the cohort sample (Luepker et al. 1994; Lando et al. 1995). Unexpectedly, large declines in smoking prevalence, especially among men, were observed in comparison communities.

In the Pawtucket Heart Health Program, the impact of a communitywide program for reducing risks for cardiovascular disease in Pawtucket, Rhode Island, was compared with trends in a nearby matched community in southern Massachusetts (name withheld to honor a confidentiality agreement with the city government) (Carleton et al. 1995). Pawtucket was selected

as the intervention site from among a pool of nine potential northeastern New England cities; the comparison site had similar sociodemographic characteristics. Surveys of risk factors for cardiovascular disease were conducted with random samples of residents aged 18 to 64 years in the two communities at two-year intervals, beginning in 1981 and continuing until 1993. Communitywide educational strategies emphasized public awareness campaigns, behavior change through existing community resources and volunteers, and community activation to promote involvement and environmental changes (Elder et al. 1987, 1993; Lefebvre et al. 1987). During the seven-year intervention program from 1984 to 1991, more than 500 community organizations were involved, including schools, religious and social organizations, larger worksites, and city government departments. Overall projected risk for cardiovascular disease declined significantly in Pawtucket during the educational program, but the prevalence of cigarette smoking declined only slightly and did so more in the comparison than in the intervention community (Carleton et al. 1995).

Concurrent with the community-based cardiovascular disease prevention trials in the United States, an antitobacco community education program was initiated in India (Anantha et al. 1995). The trial was conducted between 1986 and 1992 in the Karnataka State. One intervention area (117 villages) and two control areas (136 and 120 villages) were selected within the Kolar District. A baseline survey was conducted in 1986, and follow-up surveys were conducted two and five years later. Villages were randomly sampled in each of the three areas, and the tobacco use habits of all residents of each household were assessed. A subsample of the villages selected at baseline was resurveyed two and five years later to provide cohort follow-up. After the baseline survey, a three-year educational campaign used health worker staff from Primary Health Centres to visit each village at least once a week and deliver health education messages about the risks of cigarette smoking and other forms of tobacco use, particularly chewing. Handbills, photographs, posters, and films in multiple languages were used to reinforce health education counseling delivered to individuals and small discussion groups. Among tobacco users in the intervention area, prevalence declined 26.5 percent for men and 36.7 percent for women. The proportional reduction in the prevalence of any tobacco use was significantly greater in both men and women in the intervention area than in the two control areas (10.2 vs. 2.1 and 0.5 percent for men and 16.3 vs. 2.9 and 0.6 percent for women).

The Federal Republic of Germany began the German Cardiovascular Prevention (GCP) Study in the mid-1980s (GCP Study Group 1988). The seven-year prevention campaign in the GCP Study targeted more than 1 million people in six intervention regions whose demographic and socioeconomic structure reflected that of the West German population. The reference population was sampled from the total West German population. The goal of the campaign was to reduce four risk factors for cardiovascular disease (hypertension, hypercholesterolemia, smoking, and obesity) by using a multifaceted prevention program. Public health services, voluntary welfare federations, institutions for adult education, sports and consumer associations, and other existing community resources and facilities were used extensively. The campaigns sought the involvement of health care providers and emphasized consumers' access to them. Special emphasis was placed on improving community knowledge and awareness of healthy nutrition, the benefits of physical activity, and the importance of quitting smoking. To identify persons at high risk for hypertension and hypercholesterolemia, screenings were conducted at social events, in factories, and at other community settings in close cooperation with physicians, pharmacists, and health insurance companies. To discourage smoking, non-smoking restrictions were extended in public places, and educational campaigns were conducted in the media and in community settings to promote smoking cessation and to help smokers quit. For the evaluation of risk factor trends, representative samples of residents aged 25–69 years from the intervention regions and of the national population of West Germany were surveyed before the intervention (May 1984 to March 1986), at midstudy (February 1988 to April 1989), and at the end of the intervention (April 1991 to April 1992) (Hoffmeister et al. 1996). In the national reference sample, the prevalence of smoking declined from 34.0 percent at baseline to 33.5 percent at the end of the study. In the intervention region, the prevalence of smoking declined from 35.4 percent at baseline to 32.5 percent at the end of the study, for a net change of –6.7 percent ( $P < 0.001$ ). The decline occurred exclusively among men (net change of –7.9 percent,  $P < 0.001$ ). Among women, the prevalence of smoking increased in both the intervention regions and nationwide, and no intervention impact was noted (net change of –1.8 percent).

Using a somewhat different design, the Community Intervention Trial for Smoking Cessation (COMMIT) was started in the late 1980s (COMMIT Research Group 1991). COMMIT focused solely on smoking cessation and built on the initial experience in the

ongoing trials to prevent cardiovascular disease. COMMIT was planned as a randomized community trial with 11 pairs of communities and had adequate statistical power to detect relatively small intervention effects (Gail et al. 1992). One community of each pair was randomly allocated to the intervention program, and the other was monitored as a control. The 11 intervention communities received a four-year educational program that focused on adult cessation, with special emphasis on “heavy” cigarette smokers (those who smoked 25 or more cigarettes per day). The intervention philosophy of the trial assumed that a comprehensive communitywide strategy would make it difficult for residents in the 11 targeted sites to avoid exposure to messages about the importance of nonsmoking and would alert smokers to the many opportunities for cessation. Interventions focused on four primary educational channels: media-based and communitywide events, health care providers (e.g., physicians and dentists), worksites and other organizations, and cessation resources. Within these channels, the centrally developed protocol specified 58 mandated activities, designed to be carried out largely by community volunteers and local staff or agencies with limited external resources (Lichtenstein et al. 1990–1991). Intervention activities started after the baseline survey and randomization, beginning with community mobilization in January 1989 and continuing with protocol-defined intervention through December 1992. A telephone survey was conducted in each of the 22 sites to estimate baseline prevalence and identify cohorts of heavy and light-to-moderate smokers. Cohort members were contacted annually by telephone, with a final assessment in early 1993. A final prevalence survey was conducted in all 22 communities from August 1993 to January 1994.

There was a high degree of community ownership within the 11 intervention sites (Bracht et al. 1994; Lichtenstein et al. 1996), and program staff and community organizations diligently delivered the 58 mandated activities. Hence, the modest effects observed in this trial were sobering for the public health community (Fisher 1995; Susser 1995). No cessation effect was observed for the “heavy” smokers for whom the trial was specifically designed (COMMIT Research Group 1995a). Among the evaluation cohort of light-to-moderate smokers, a significantly greater proportion quit in the intervention than in the control communities (30.6 vs. 27.5 percent) over the four-year intervention period, and the effect was strongest among the less educated residents of the communities. Overall the prevalence of smoking declined

slightly (but nonsignificantly) more in the intervention communities (3.5 percentage points) than in the comparison communities (3.2 percentage points) (COMMIT Research Group 1995b). The quality and statistical power of the overall trial design (Gail et al. 1992) make it unlikely that any true intervention effects were missed. The COMMIT intervention protocol sought to apply the most effective smoking cessation strategies as defined by the published literature (Lichtenstein et al. 1990–1991; COMMIT Research Group 1991). The investigators were limited, however, in their ability to be involved in many of the recommended ecological and policy-oriented health promotion strategies (WHO 1979; Green and Richard 1993) because of restrictions imposed by federal funding of the study (Fisher 1995; Susser 1995). In addition, process data showed that implemented protocol did not have a significant impact on many important intermediate variables (e.g., physician and dentist counseling rates, worksite smoking bans, public attitudes toward smoking) (Glasgow et al. 1997; Ockene et al.

1997; Taylor et al. 1998). Therefore, the failure of the COMMIT interventions to use certain strategies or to change intermediate social and policy variables suggests that the study was not an adequate test of the efficacy of the social-environmental approach to reducing tobacco use.

Several reviewers have provided some perspectives on the modest smoking cessation effects observed in these community trials (Green and Richard 1993; Luepker 1994; Winkleby 1994; Fisher 1995; Susser 1995). Common themes are (1) the difficulty in observing intervention effects because of the large secular declines in risk factors for cardiovascular disease, including smoking, that occurred during the period when the trials were implemented and (2) the need for a more comprehensive health promotion approach. A more complete understanding is needed of why such modest and mixed smoking cessation effects have been observed in numerous well-designed and well-implemented communitywide trials.

## **Statewide Interventions**

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Concurrent with the implementation of the community intervention trials, a broader national movement to reduce tobacco use began to emerge in the 1980s. Unlike the community intervention trials, this movement, and the large-scale interventions that developed from it, was not structured around research hypotheses and preplanned evaluation designs. Rather, the movement was characterized by community mobilization at the national, state, and local levels and encompassed the principles of health promotion as a social movement that evolves (Kickbusch 1989; Allison and Rootman 1996; Downie et al. 1996; Nutbeam 1998). Funding for these efforts came from both federal and private sources; however, an important manifestation of this national movement was the establishment of statewide interventions funded by increases in cigarette excise taxes or settlements with the tobacco industry. Such increases were the result of voter initiatives, beginning with those in California in 1990 and Massachusetts in 1993. The next section of this chapter reviews the main elements of the national movement.

## **Community Mobilization**

A significant step in organizing the movement to reduce tobacco use was the founding in 1981 of the Coalition on Smoking OR Health, which consisted of representatives from three major volunteer health agencies: the American Cancer Society (ACS), the American Heart Association, and the American Lung Association. The formation of a national coalition prompted state- and local-level leaders of these organizations to form similar triagency coalitions. Some of these state and local coalitions expanded to include representatives from other groups, such as medical societies, other volunteer health organizations, and state health departments. These coalitions were among the first efforts to mobilize communities at the state and local levels.

The consensus of the 1985 International Summit of Smoking Control Leaders in Washington, DC, was that only unified, broadly based, strategically coherent, and flexible national movements for reducing smoking were destined to be successful. To help build such movements, the summit participants recommended producing a handbook on coalition building.

The resulting ACS publication, *Smoke Fighting: A Smoking Control Movement Building Guide* (Pertschuk and Erickson 1987), examined the strengths and weaknesses of networks and coalitions and gave suggestions for building and strengthening these forums. This guide was one of the earliest produced on community organizing to reduce tobacco use.

A survey conducted by the Association of State and Territorial Health Officials determined that as of December 31, 1989, coalitions for reducing tobacco use had been formed in 46 states and the District of Columbia (CDC 1990). Only Hawaii, Kentucky, Mississippi, and South Carolina did not have state-level coalitions at that time. Of the 47 coalitions, 44 concentrated on reducing tobacco use; the remaining 3 addressed tobacco use, as well as other chronic disease risk factors. Although Colorado established the first tobacco-related coalition in 1963, coalitions in 28 states were not established until after 1984. Coalition activities included lobbying, providing public education, educating health care professionals, conducting research and evaluation, and developing and implementing a state plan for reducing tobacco use (Pertschuk and Erickson 1987).

Until recently, the United States remained without a national program for tobacco-related risk reduction analogous to those established for hypertension and hypercholesterolemia. During the 1990s, three nationally funded programs—two by the federal government and one by a private foundation—and one federally funded research project have helped states and localities mobilize for reducing tobacco use. As noted, several states provided funds for state and local community organizing.

## National Programs

### ASSIST

The American Stop Smoking Intervention Study (ASSIST) for Cancer Prevention is a partnership between the NCI and the ACS to establish coalitions that focus on using public policy change to reduce tobacco use (see also “Community Programs” in Chapter 4). The ASSIST project was developed after many NCI consultants had recommended that community-based coalitions for reducing tobacco use be established in entire states or in large metropolitan areas. The ASSIST guidelines provided both the rationale for the coalition model and the flavor of the overall project:

- Smoking is a public health problem that affects everyone in a community, not only smokers. The solution to the smoking problem requires the active involvement of a broad range of groups and individuals.
- Significant and enduring changes in smoking behavior require a change in social norms, that is, that smoke-free environments and lifestyles are preferred and encouraged among all social groups. Changes in social norms occur over time with the involvement and support of a broad representation of interest groups.
- Tremendous resources are invested each minute of every day to encourage young people to begin smoking as a normal and acceptable behavior. The resources required to counter this effort and to effect a significant change in smoking behavior far exceed the funds available through this [ASSIST] project. A large contribution of direct and in-kind support in the form of time, energy, volunteers, and other resources will be required. Only through the commitment of a variety of groups and organizations can adequate resources be made available.
- The intent of ASSIST is not to create a new institution devoted to smoking control but rather to increase the capacity for existing groups and organizations to sustain and enhance their role as smoking control agents beyond the life of ASSIST. Activities by different groups will be coordinated and efforts thereby magnified, and strategies and training will be disseminated and institutionalized in each coalition member group (NCI 1991, pp. 1–2).

ASSIST included an initial planning phase (1991–1993) and a subsequent implementation phase (1993–1998) for the 17 states chosen for participation. The implementation phase was then extended to September 1999. During the planning phase, the coalitions performed comprehensive site analysis and developed a plan for reducing tobacco use. For planning, each state received approximately \$400,000 per year to develop its own comprehensive, five-year plan (Manley et al. 1997a). During the implementation phase, states have been receiving an average of approximately \$1.2 million per year to carry out the action steps in accordance with NCI guidelines and ASSIST program objectives. Intensive training of state health department and voluntary agency personnel in the ASSIST states was a primary activity during the planning phase and

early years of the implementation. This training focused on the program objectives, including policy changes, media advocacy, and community mobilization. An interim evaluation of impact (Manley et al. 1997b) found that per capita cigarette consumption and inflation-adjusted cigarette prices were nearly identical in the 17 ASSIST states and the remaining non-ASSIST states (excluding California) before 1993, when full funding for the ASSIST intervention began. By 1996, per capita consumption in the ASSIST states was about 7 percent less than in the non-ASSIST states. This decrease occurred in the face of a general decline in cigarette prices during the period of evaluation. These interim results suggest that the ASSIST program has been associated with a significant decrease in cigarette consumption and that increased price from taxation may not be the only program influence.

## IMPACT

In its Initiatives to Mobilize for the Prevention and Control of Tobacco Use (IMPACT) program, the CDC has funded the District of Columbia and 32 states that do not receive funding from the ASSIST project. The exception is California, which is not funded by ASSIST or by the CDC but since 1989 has had a tobacco control program funded by the state excise tax on cigarettes. (The California program is described later in this chapter.) A portion of IMPACT funds supports community mobilization at the state and local levels, with particular focus on racial and ethnic minority groups and women. The IMPACT program also provides extensive training to representatives of state coalitions in subjects such as media advocacy, policy advocacy, and coalition building.

Recently, the IMPACT program has been expanded to include key national organizations to help them mobilize their constituencies in efforts to reduce tobacco use. Funds have been especially directed to organizations that serve populations targeted by the tobacco industry's marketing plans and that are historically underrepresented in the movement to reduce tobacco use (Farquhar et al. 1985; USDHHS 1998).

## SmokeLess States Program

In 1994, the Robert Wood Johnson Foundation initiated the SmokeLess States program to provide additional funds to state coalitions. In the initial round of funding, the program awarded more than \$13 million in either four-year implementation grants or two-year capacity-building grants to 19 state coalitions and also funded a youth-specific project in Tucson, Arizona

(Robert Wood Johnson Foundation 1994). Two years later, funding for the SmokeLess States program was expanded to \$20 million. In this second round of funding, awards were made to 13 new states; in addition, implementation grants were made to some of the states that had previously received capacity-building grants. In 1998, SmokeLess States funded another \$6 million in grants to eight states that had been funded for four years each. Currently, the SmokeLess States program funds 28 states and 2 cities at a total of \$39 million per year. The SmokeLess States program focuses on helping state coalitions develop policy options, including prevention programs similar to those in place in California and Massachusetts (as discussed later in this chapter) and other efforts aimed at reducing tobacco consumption, especially among young people. Administered by the American Medical Association (1998), this grant program differs from ASSIST and IMPACT in that it does not have strict requirements concerning the makeup of the coalition, although community mobilization is a required program activity.

## National Programs to Reduce Youth Access to Tobacco

In 1996, SAMHSA issued regulations to implement the Synar Legislation. These regulations and the provisions of the Synar Amendment to the 1992 ADAMHA (Alcohol, Drug Abuse, and Mental Health Administration) Reorganization Act established a nationwide effort to reduce youth access to tobacco by requiring states to have and enforce laws prohibiting the sale of tobacco products to anyone under age 18. Failure to meet the requirements of the Synar legislation could result in penalties against a state's Substance Abuse Prevention and Treatment Block Grant. The full discussion of the state efforts to meet these requirements is provided in Chapter 5. By establishing a coordinated program in all 50 states and the District of Columbia to address this problem, SAMHSA has provided a core resource to the tobacco control effort across this country.

In 1996, the Food and Drug Administration (FDA) issued a rule mandating that tobacco retailers not sell tobacco to anyone under age 18 and that they require a picture identification card from anyone under the age of 27 who attempts to purchase tobacco (*Federal Register* 1996). In support of this rule, the FDA entered into contracts with state agencies to institute compliance checks of retailers and has implemented mass media and direct education campaigns to inform retailers of this rule. However, the March 21, 2000, ruling of the United States Supreme Court held that

the FDA lacks jurisdiction to regulate tobacco products as customarily marketed. Following this decision, the FDA immediately began the process of terminating the contracts with state agencies and shutting down its enforcement program. The full discussion of this program is provided in Chapter 5.

### States Currently Funded in the Nationwide Program to Reduce Tobacco Use

In 1998, 49 state health departments and the District of Columbia received funding from the USDHHS for activities to reduce tobacco use. The NCI's ASSIST project provided 17 states with approximately \$21.5 million, and the CDC's IMPACT program funded 32 states and the District of Columbia with approximately \$12 million. In February 1998, the CDC and the NCI were given joint responsibility to assist states and national organizations in amalgamating the findings of comprehensive research projects, the CDC and NCI programs, and the state and local programs funded by tax initiatives and legal settlements with the tobacco industry. This process will continue the evaluation of a national program that includes all states, the District of Columbia, territories, and tribes and aims to bring synchrony and coherence to the efforts of all groups working to reduce tobacco use.

In May 1999, the CDC launched the National Tobacco Control Program (NTCP) transitioning funding through various federal initiatives into one national program. The purpose of the NTCP is to build and maintain a coordinated national effort to reduce the health and economic burden of tobacco use. Federal funding is intended to support core public health tobacco control functions or to enhance existing tobacco control programs within state and territorial health departments. The program framework is based on the comprehensive tobacco control framework outlined earlier in the chapter (see "Description of Comprehensive Programs"). The NTCP funds tobacco control programs in all states, the District of Columbia, and seven U.S. territories. The NTCP also includes initiatives to fund American Indian tribal organizations to develop or improve tobacco-related regional resource networks and outreach to tribes. In 2000, the NTCP launched a new initiative to aid in the elimination of disparities in health status and outcomes among populations as it relates to tobacco use. In fiscal year 1999, the NTCP awarded \$50 million to 50 states, the District of Columbia, and seven territories for a five-year cooperative agreement starting June 1, 1999, to May 30, 2004. In fiscal year 2000, funding to the states, the District of Columbia, and territories totaled \$59 million. The

average award for states and the District of Columbia is \$1.13 million. The average award for territories is \$140,000. The total includes supplemental awards of \$499,400 for asthma and ETS, funded in conjunction with the Environmental Protection Agency, and \$244,000 for Smoke-Free Kids and Soccer. The state awards almost close the funding gap between the former NCI-funded states (ASSIST) and the other states. States with excise tax or settlement-funded programs are required to match federal funds 4 to 1. For all others, the match is 1 to 10.

### Examples of Major State Programs

State coalitions have encouraged both legislation and voters' initiatives to raise state excise tax levels on tobacco products and earmark some portion of the new revenue for tobacco prevention and control programs (Shultz et al. 1986; Nicholl 1998). In 1985, the Minnesota Coalition for a Smoke-Free Society 2000 led a legislative effort that was the first to pass tobacco use prevention legislation that centered on an increase in the state cigarette excise tax. Since 1985, more than 40 other states have increased their excise tax on cigarettes; as part of the appropriations process, some of these states have also funded selected tobacco control activities with this revenue increase. One such state—Maine—in May 1997 legislated an excise tax increase that earmarked funds for a more comprehensive tobacco control program.

In some states, voters' initiative process, rather than the legislative process, has been the primary mechanism by which new revenue from an excise tax increase of tobacco products has been earmarked for tobacco prevention. Voters in 24 states and the District of Columbia are permitted to sign petitions that place a proposed law on the state ballot for referendum (Nicholl 1996). Since 1988, in eight such states, coalitions have tried to use the voters' initiative process to fund statewide tobacco control programs. State coalitions were successful in winning voter approval in four of these states: California in 1988, Massachusetts in 1992, Arizona in 1994, and Oregon in 1996. Initiatives were unsuccessful in Montana (1990), Nebraska (1992), Arkansas (1992), and Colorado (1994) (Moon et al. 1993; Ross 1996; Nicholl 1998).

The four state programs funded by successful voters' initiatives are described in the next sections of this chapter. They follow discussions of the two state programs (in Minnesota and Maine) that were established by legislated appropriations for a comprehensive tobacco control plan.

## Minnesota

In 1975, Minnesota was one of the first states that passed statewide comprehensive legislation for clean indoor air. In 1983, the Commissioner of Health formed the Center for Nonsmoking and Health, which oversaw the development of *The Minnesota Plan for Nonsmoking and Health* (Minnesota Department of Health 1984) by a multidisciplinary technical advisory committee in 1984. In that same year, nearly 30 public and private organizations within the state formed the Minnesota Coalition for a Smoke-Free Society 2000.

By drawing increased attention to the hazards of smoking and of ETS exposure, the Minnesota Department of Health, together with civic and community leaders, stimulated legislation to implement the recommendations of *The Minnesota Plan for Nonsmoking and Health*. The legislative history and debate surrounding the passage of the resulting 1985 comprehensive legislation for preventing tobacco use have been summarized by Shultz and colleagues (1986). The legislation provided for an increase in the state cigarette excise tax from \$0.18 to \$0.23, with one cent of the revenue increase earmarked for a public health fund, approximately one-half of which was to be set aside for preventing tobacco use. Further, this legislation authorized the Commissioner of Health to launch a major statewide initiative—the Minnesota Tobacco-Use Prevention Initiative—to promote nonsmoking and established state aid for school-based programs to prevent tobacco use.

The legislation allocated funding to support the school-based programs at the rate of \$0.52 per student during the 1985–1986 school year and \$0.54 per student during future years. School districts were authorized to use these new funds for staff in-service training, curricula and materials, community and parent awareness programs, and evaluation.

Three principles guided the state's tobacco control programs. First, a broad base of public support was developed by the collaboration of the Minnesota Coalition for a Smoke-Free Society 2000, the Association for Nonsmokers—Minnesota, voluntary health agencies, health professionals, and insurers. Second, the program maintained a positive approach that stressed the consequences of tobacco use rather than attacked the tobacco industry or blamed smokers. Third, the program focused on preventing tobacco use among adolescents and young women who had not yet become addicted to cigarettes or smokeless tobacco.

The mass media campaigns were the most visible component. The campaigns included paid television, radio, and outdoor/transit advertising directed at two target populations: 12- to 13-year-old boys and girls and 18- to 24-year-old women. The goal of the media campaign was to change a social climate that encouraged the use of tobacco. Advertisements focused on increasing the awareness of the negative aspects of tobacco use that are most important to young people—unpleasant social and personal consequences, such as bad breath, smelly clothes, and addiction.

To foster community tobacco control programs, *The Minnesota Plan for Nonsmoking and Health* recommended that schools, health services, and other community organizations be involved in providing prevention and education programs about tobacco use. A granting program was established in 1986 to fund 21 proposals from local organizations that could demonstrate a coordinated approach for involving multiple local organizations in the prevention effort. A second cycle of local projects was funded in 1988.

Schools throughout the state were involved in an intensive effort to plan, implement, and evaluate effective programs for students from kindergarten (K) to grade 12 and in technical institutes. Since the start of these programs in the 1986–1987 school year, the percentage of school districts addressing smoking in grades K–4 steadily increased but remained fairly constant in grades 5–10. The number of school districts in the state with a tobacco-free policy, however, steadily increased.

Each of the main program elements funded by the Minnesota Tobacco-Use Prevention Initiative has been evaluated (Minnesota Department of Health 1989, 1991). Youth and adults targeted by the program were aware of the media campaign, and the evaluation data suggested that the campaign improved young people's attitudes toward tobacco use (Minnesota Department of Health 1991). There was a steady increase in the number of school districts whose curricula included components for preventing tobacco use (Minnesota Department of Health 1991). Nonetheless, a prospective study indicated that schools using the prevention curricula were not more effective in reducing adolescent tobacco use than were a randomized control group of schools (Murray et al. 1992). In that study, a comparison of trends in adolescent tobacco use in Minnesota and Wisconsin between 1986 and 1990 found a slightly larger (but nonsignificant) net decline in Minnesota. The investigators suggested that greater reach and penetration of preventive efforts may be required to produce statewide reductions in adolescent tobacco use (Murray et al. 1992).

## California

In November 1988, the Tobacco Tax and Health Promotion Act (Proposition 99) was passed by California voters, thus mandating the start of California's Tobacco Control Program. The program is the largest and most comprehensive undertaken in the United States to reduce tobacco use. Initially, the program defined three long-term objectives: (1) to reduce the initiation of cigarette smoking by children and youth under age 19 from the 1987 rate of 26.4 percent to no more than 6.5 percent by 1999, (2) to reduce cigarette smoking among adults aged 20 years and older from the 1987 rate of 26.0 percent to 6.5 percent by 1999, and (3) to reduce smokeless tobacco use among males aged 12–24 years from the 1987 rate of 8.9 percent to no more than 2.2 percent by 1999 (Tobacco Education Oversight Committee 1991). The excise tax rate on cigarettes in California rose from \$0.10 to \$0.35 on January 1, 1989, when Proposition 99 was implemented. On January 1, 1994, the tax increased to \$0.37, where it remained in 1999. Funding for tobacco control efforts began during fiscal year 1989 (July 1989–June 1990). The fiscal year 1999 budget in California was \$126.8 million (\$3.90 per capita) for tobacco control activities funded by the Department of Health Services and the Department of Education.

The NCI's planning framework (NCI 1991) was used to establish the program's target groups, intervention channels, and interventions to reach them (Bal et al. 1990). Community mobilization is a key part of California's extensive program for reducing tobacco use. Community-based programs are the responsibility of the California Department of Health Services and 61 local health departments (58 county and 3 city). These local agencies, advised by local coalitions, established multiple subcontracts with community-based organizations to conduct events, programs, and presentations for diverse racial and ethnic groups (Tobacco Education Oversight Committee 1991). Local lead agencies have been a cornerstone of the program by mobilizing communities to eliminate exposure to ETS, by closing channels for minors' access to tobacco, and by advising local policymakers. The local lead agencies receive approximately 20 percent of funds allocated for education programs to achieve these ends.

The statewide media campaign, which receives about 12 percent of funds, has been the program's most visible element. Launched in 1990, the media campaign has focused primarily on changing public opinion to denormalize tobacco use. In particular, it has sought to raise public awareness of the tobacco industry's manipulative and deceptive marketing

tactics and of the dangers of ETS. Although young people are a direct target audience for some campaign messages, the campaign has focused more on changing social norms and reducing adult tobacco use to influence youth, many of whom begin using tobacco to be more adultlike. Funding for the statewide media campaign was about \$24 million (\$0.75 per capita) in 1998 but has varied considerably over the years, as is discussed later in this section.

About 16 percent of education funds are spent on competitive grants to community-based organizations. More than two-thirds of these grants have targeted racial and ethnic minority communities. The competitive grants program has had multiple funding cycles, and 46 separate projects were funded in 1993. In addition, the competitive grants program funds several statewide projects, such as the Tobacco Education Clearinghouse of California, which distributes library and video materials, and the California Tobacco Control Resource Partnership, which provides technical assistance and training to local lead agencies. The competitive grants program has also been used to establish regional linkages among local governments and local nongovernmental organizations. Twenty-four percent of the education funds go to school-based programs to prevent tobacco use and are distributed through the California Department of Education. The project estimated that it would reach approximately 350,000 students through programs implemented between 1994 and 1996.

The single largest share, by far, of the education funds—59 percent through 1996—goes to the medical care programs. This percentage is notably higher than the 45 percent specified by the legislation (Novotny and Siegel 1996). As a result of this redistribution, the portions of the program that deal with reducing tobacco use—designated for 20 percent of the fund—have never been fully financed. In the first year, 16.5 percent of funds were allocated for such program efforts; in the second cycle, 12 percent were allocated; in the third, 10 percent. This diversion of funds was the result of executive decisions and was strongly supported by the tobacco industry and the California Medical Association. After the third diversion, civil action was initiated by Americans for Nonsmokers' Rights, supported by the American Lung Association and the ACS, to prevent the reallocation. The Sacramento Superior Court found in favor of the plaintiffs in early 1995. The state appealed, and the judgment for the plaintiffs was upheld in December 1996 (*Americans for Nonsmokers' Rights v. State of California*).

The complicated course of these events, as detailed by Novotny and Siegel (1996), has highlighted

the role of the tobacco industry in countering efforts to reduce the use of its products and the opposing strategy of health advocates. Begay and colleagues (1993) have pointed out that since Proposition 99 passed, the tobacco industry's political expenditures in California have risen tenfold, from \$790,050 in the 1985–1986 election to \$7,615,091 in the 1991–1992 election, during which the tobacco industry contributed more heavily to candidates for the California legislature than to candidates for the U.S. Congress. In a further analysis, this same research group (Traynor et al. 1993) detailed the specific industry strategies to prevent local control of tobacco use. Using case studies, they documented the industry's use of front groups to conceal its involvement, its organization of local referenda to defeat or suspend local ordinances, and its financing of local election campaigns to repeal ordinances by popular vote. Glantz and Begay (1994) have also analyzed the relationship between campaign contributions and votes on individual tobacco-related bills in the California legislature. Using a "tobacco policy score" (p. 1178) that ranked legislators according to their stance for or against reducing tobacco use, they found a significant relationship between the amount of money received from tobacco sources and a protobacco position. This ongoing documentation of tobacco industry influence, though not a formal part of the California Tobacco Control Program, has been one of its notable features, and it provides a model of health advocacy for other states and localities.

The program, which has evolved considerably since 1989, remains a multifocal, multichannel approach to the broad range of issues that confront large-scale efforts to reduce tobacco use (Tobacco Education and Research Oversight Committee 1995; Pierce et al. 1998a). In 1993, the California Tobacco Control Program was revised, and program priorities were refocused (Pierce et al. 1998a). Four broad priority areas, or policy themes, were established for use in the program planning and funding decisions:

- Protecting people from exposure to ETS.
- Revealing and countering tobacco industry influence.
- Reducing young people's access to tobacco products.
- Providing cessation services.

The California Tobacco Control Program continues to place its primary emphasis on a broad statewide infrastructure that reaches into communities across the state. The program's basic structure is composed of a

state-level office and several statewide and regional programs that foster a collaborative grassroots approach to serve a decentralized structure of community programs across the state (Pierce et al. 1998a).

Surveillance and evaluation activities to assess program performance and impact were established as part of the initial program structure (Bal et al. 1990; Tobacco Education Oversight Committee 1991). The evaluation is composed of large triennial surveys (Pierce et al. 1994, 1998a) and smaller ongoing surveys (Pierce et al. 1998b), a more targeted evaluation of program components (Independent Evaluation Consortium 1998), and a wide array of local program evaluation efforts. Evaluation is complicated, however, by the multiplicity of prevalence surveys available and by potential error from using data from surveys with differing methods (Novotny and Siegel 1996; Siegel et al. 2000). Establishing specific relationships between large-scale social interventions and a change in tobacco use is difficult, but the temporal relationship between the decline in California's tobacco consumption and the efforts generated by Proposition 99 can be clearly observed.

#### *Per Capita Cigarette Consumption*

Before the implementation of the program in 1989, the rate of decline in monthly per capita cigarette consumption was 0.42 packs, which was significantly greater than the rate of 0.36 in the rest of the country (Pierce et al. 1998a,b). From January 1989 through December 1993, the decline in California increased significantly, to 0.65 packs, while the decline in the rest of the United States increased nonsignificantly, to 0.45 packs. Until early 1992, the media program was the only part of the tobacco control program that was fully implemented. An econometric analysis (Hu et al. 1995) has estimated that of the 1,051-million pack decrease in sales between 1990 and 1992, approximately 232 million (22 percent) were attributed to the media campaign and the remaining 819 million (78 percent) to the excise tax increase. Between 1993 and 1996, the rate of decline in per capita consumption in California slowed significantly, to 0.17, but virtually halted altogether in the rest of the country (at 0.04 packs) (Pierce et al. 1998b). Consumption decreased more rapidly in California than in the rest of the country, even though the California cigarette excise tax changed only slightly during this period (from \$0.35 in 1993 to \$0.37 in 1994). Between 1993 and 1996, however, expenditures for tobacco control were reduced by more than 50 percent from their initial funding levels in fiscal year 1990 and 1991. During 1989–1993, spending for advertising and promotions by the

tobacco industry exceeded tobacco control expenditures in California by a ratio of about 5 to 1; from 1993 to 1996, that ratio increased to nearly 10 to 1 (Pierce et al. 1998b).

### *Adult Smoking Prevalence*

Data on adult patterns of smoking prevalence are not as consistent or as easy to evaluate as consumption trends (Novotny and Siegel 1996). Nevertheless, the trends in these data are consistent with the patterns noted in the per capita consumption analyses. From 1989 to 1993, smoking prevalence declined in California almost twice as rapidly as in the rest of the country (Pierce et al. 1998b). However, from 1994 to 1997, the rate of decline in California appeared to slow. Overall, smoking prevalence has declined from 26.7 percent in 1988 to 16.7 percent in 1995 in California and from 30.2 percent in 1988 to 24.7 percent in 1995 in the rest of the country (CDC 1996; Pierce et al. 1998b). A recent analysis of trends in adult prevalence of smoking in California compared with the rest of the United States observed a significant decline in smoking prevalence in California from 1985 to 1990 and a slower but still significant decline from 1990 to 1994, a period in which there was no significant decline in the remainder of the nation (Siegel et al. 2000).

### *Youth Tobacco Use Prevalence*

The lack of consistent youth smoking surveillance data between California and other states has impeded the evaluation of program impact on tobacco use among young people in California. However, one multivariate analysis of data from the school-based Monitoring the Future survey of 8th-, 10th-, and 12th-grade students showed that from 1992 to 1994, the increase in youth smoking rates that was experienced nationwide was slowed significantly in California ( $P < 0.001$ , controlling for price, smoking policies, and other nonprogram effects) as a result of the combined effect of the tax increase in 1994 and the implementation of the state's tobacco control programs (Chaloupka and Grossman 1996). Pierce and colleagues (1994) have concluded that the media campaign was successful in stopping the rise in teen smoking that had been occurring in California before the campaign launch.

Results from other analyses of youth tobacco use data are consistent with the result found by Chaloupka and Grossman (1996). In data reported by the California Independent Evaluation Consortium, between 1991 and 1996, rates of smoking during the past 30 days among California youth in the 8th and 10th grades in the Monitoring the Future survey increased, but the

increase in California was less pronounced than in other states (Independent Evaluation Consortium 1998). Among 8th-grade youth, since 1993 the prevalence of smoking during the past month has varied from 12 to 14 percent in California while steadily increasing from 17 to 22 percent in the rest of the country. Similarly, among 10th-grade youth, past-month smoking prevalence in California has been about 18 to 19 percent since 1992 while increasing from 22 to 32 percent in the rest of the country. Data from the telephone-based California Youth Tobacco Survey indicate that the prevalence of smoking during the past 30 days among 12- to 17-year-olds increased from approximately 9 percent in the early 1990s to 11.9 percent in 1995. Prevalence declined gradually after 1995, to 10.9 percent in 1997, while increasing in the rest of the country (Pierce et al. 1998a).

### *Other Findings*

Since the start of the program in 1990, numerous changes in intermediate outcomes have been noted related to changes in social norms; clean indoor air policies in public places, worksites, and bars; and voluntary policies to ban smoking in homes.

### **Massachusetts**

In November 1992, Massachusetts voters approved an initiative petition known as Question 1, establishing the Health Protection Fund with revenue generated from a 25-cent increase in the state's cigarette excise tax and a 25-cent increase in the wholesale price of smokeless tobacco products. Revenues have been used to fund the Massachusetts Tobacco Control Program, a comprehensive set of activities and services that emphasize prevention programs at the local level and that focus on young people. The Massachusetts program was modeled, in part, on California's program. The overall goal of the program was to reduce tobacco use in Massachusetts by 50 percent by the end of 1999 (Abt Associates Inc. 1995). With the passage of Question 1, the excise tax on cigarettes in Massachusetts rose from \$0.26 to \$0.51 on January 1, 1993. This tax was fully absorbed by the industry through wholesale price reductions (CDC 1996). However, in October 1996 the cigarette tax increased to \$0.76 per pack (with comparable increases on smokeless tobacco products), where it currently remains.

Funding for tobacco control efforts began with a large media campaign in October 1993. In late 1993 and early 1994, funding for local agencies was begun, and several statewide initiatives were undertaken to provide direct services, as well as technical assistance,

training, and materials for localities. Starting in late 1994, with the first year of complete implementation, the program received \$43.1 million (33.7 percent) of the \$127.8 million placed in the Health Promotion Fund created by the revenues from the excise tax increase. Other key programs receiving appropriations from the Health Promotion Fund were those for comprehensive school health education (\$28.8 million, or 22.5 percent of the Health Promotion Fund in fiscal year 1995), drug education (\$5.0 million, or 3.9 percent), and other health-related programs (\$50.7 million, or 39.7 percent) (Abt Associates Inc. 1995). After the first funding year, the program's budget declined to \$41.8 million in 1995–1996 and to \$36.8 million in 1996–1997. Funding was increased for other programs receiving appropriations from the Health Promotion Fund (Abt Associates Inc. 1997).

Community-based education activities and prevention activities are two main elements of the Massachusetts program. The state's 10 regionally based, primary care Prevention Centers have added a component for reducing tobacco use and provide ongoing technical assistance and training to local community programs. Local community initiatives have included programs to increase community awareness about the hazards of tobacco use, to promote tobacco-free workplaces and public facilities, and to enforce local regulations and ordinances for reducing tobacco use; needs assessments in the community; mobilization of youth service agencies to prevent and reduce tobacco use among children and adolescents; funding of community-based agencies to work with at-risk adult populations, including cultural and linguistic minority groups, women of childbearing age, and blue-collar workers; and funding of school-based health centers (Abt Associates Inc. 1995).

#### *Per Capita Cigarette Consumption*

As in California, Massachusetts has experienced a persistent pattern of decline in per capita cigarette consumption. Before the 1993 implementation of these tobacco control programs, per capita cigarette consumption was declining in Massachusetts at a rate approximately equivalent to that of the rest of the country (6.4 percent in Massachusetts and 5.8 percent in the states other than California [CDC 1996]). Between 1992 and 1997, per capita consumption in Massachusetts declined by 31 percent (from 117 to 81 packs per adult), while the decline in the remaining 48 states was only 8 percent (Abt Associates Inc. 1997). Between 1993 and 1996, the decline in per capita consumption has been more consistent in Massachusetts than in California (CDC 1996). Although program funding declined about

15 percent in Massachusetts from 1995–1996 to 1996–1997 (Abt Associates Inc. 1997), it declined less than in California.

#### *Adult Smoking Prevalence*

Adult smoking prevalence has been monitored in Massachusetts both by the annual survey conducted through the Behavioral Risk Factor Surveillance System (BRFSS) and by special Massachusetts Adult Tobacco Surveys conducted in 1993, 1996, and 1997. Data from the BRFSS indicate that adult smoking prevalence in Massachusetts declined from an average of 23.5 percent for 1990–1992 to 20.6 percent in 1997. In the rest of the country (excluding California), prevalence declined from 24.1 percent in 1990–1992 to 23.4 percent in 1993–1995 (CDC 1996; Abt Associates Inc. 1997). The Massachusetts survey produced different prevalence estimates but corroborated a similar decline in the prevalence of smoking among adults in Massachusetts (from 22.6 percent in 1993 to 21.1 percent in 1996 and 20.6 percent in 1997) (Abt Associates Inc. 1997).

#### *Youth Tobacco Use Prevalence*

As in California, the observed nationwide increase in the prevalence of smoking among young people from 1992 to 1994 was significantly less evident in Massachusetts (Chaloupka and Grossman 1996). Follow-up data from the Youth Risk Behavior Survey (YRBS) indicated that the prevalence of current smoking among Massachusetts high school students (grades 9 to 12) declined from 35.7 percent in 1995 to 34.4 percent in 1997 while increasing from 34.4 to 36.4 percent nationwide (CDC 1996, 1998). Data from the YRBS and other survey sources suggest a differential pattern by age: the prevalence of current smoking increased in Massachusetts among older students in a manner similar to that of the rest of the country but declined among younger students. Between 1993 and 1996, the prevalence of smoking during the past 30 days among 8th-grade students in Massachusetts declined from 26.5 to 26.0 percent but increased from 16.7 to 21.0 percent nationwide (Briton et al. 1997). For Massachusetts, the prevalence of current smokeless tobacco use among 9th–12th graders decreased from 8.4 percent in 1995 to 6.0 percent in 1997; for males, the decline was from 15.1 to 10.3 percent (Kann et al. 1998). In the nation as a whole between 1993 and 1996, lifetime use of smokeless tobacco among 9th–12th graders decreased from 25 to 20 percent, and current use decreased from 9 to 6 percent (Briton et al. 1997). The most recent data from the 1999 YRBS in Massachusetts indicated a continuing decline in the

prevalence of current smoking, down to 30.3 percent among 9th–12th graders (Goodenow 2000); however, national comparison data for 1999 are not yet available.

A 1996 survey of 12- to 14-year-olds in Massachusetts and a national comparison sample (Houston Herstek Favat, Youth exploratory 1996, Massachusetts Department of Public Health, presentation of findings, unpublished data) found that Massachusetts youth had significantly higher levels of agreement with issues addressed in the state media campaign. For example, 59 percent of Massachusetts youth but only 35 percent of youth in the national sample agreed with the statement, “Smoking cigarettes decreases your stamina and smokers have a hard time keeping up in sports.” Results from a longitudinal survey of Massachusetts youth provided additional support for the efficacy of the Massachusetts antismoking media campaign (Siegel and Biener 2000). In a four-year follow-up of youth aged 12 to 15 years in 1993, this study found that among the younger adolescents (aged 12 to 13 years at baseline), those exposed to antismoking advertisements were significantly less likely to progress to established smoking. However, among older adolescents (aged 14 to 15 years at baseline), exposure did not prevent progression to established smoking.

### *Other Findings*

There have been multiple changes in intermediate measures of program impacts related to youth access, protection of nonsmokers from ETS, and availability of cessation services (Abt Associates Inc. 1999). For example, by 1999, nearly two-thirds of Massachusetts residents lived in cities and towns with some kind of smoking restriction in restaurants, and 26 percent were protected by complete bans. Prior to the start of the program, less than 1 percent of Massachusetts residents lived in towns with complete bans. Additionally, the local restaurant smoking restrictions were found to be more restrictive in communities receiving funding from the Massachusetts Tobacco Control Program.

### **Arizona**

In November 1994, Arizona voters passed Proposition 200, which increased the state cigarette excise tax from \$0.18 to \$0.58. Revenues from the tax increase were earmarked for the state’s Medicaid program (70 percent of revenues), for programs for preventing and reducing tobacco use (23 percent), for research on prevention and treatment of tobacco-related disease and addiction (5 percent), and for an “adjustment account” (Arizona Tobacco Tax and Health Care Act 1994, sec. 2C4) to offset lost revenue to other state programs

currently funded by revenue from the existing \$0.18 excise tax (2 percent). The petition drive to place the initiative on the November 1994 state ballot and the campaign to win voter approval was led by the Arizona for a Healthy Future coalition. Although public support for the initiative was strong when it was first proposed in 1993 (71 percent in favor, with 56 percent indicating strong support), the initiative was vigorously opposed in a well-funded advertising effort on television, in posters, and by direct mail. Proposition 200 was narrowly approved, garnering approximately 51 percent of the vote (Nicholl 1998).

With the passage of Proposition 200, analysts estimated that the revenues earmarked for tobacco prevention and education programs would be approximately \$25 million per year (Meister 1998). However, measures passed during the 1995 session gave the legislature control over the funds and limited expenditures to \$10 million per year (Madonna 1998). Additionally, multiple restrictions were placed on how the funds could be used, and an advisory committee was appointed that included legislative and business representatives hostile to the program (Meister 1998). Although the Coalition for Tobacco-Free Arizona led an effort to keep the goals of the newly created Arizona Tobacco Education and Prevention Program (AzTEPP) “comprehensive,” the program efforts were narrowed to a focus on youth prevention; adult cessation activities were restricted to pregnant women and their partners. Not until the fiscal year that began on July 1, 1997, with a new governor and health department director, were the programmatic restrictions lifted from the health department and the program allowed to proceed with the implementation of the “draft” comprehensive tobacco control plan originally proposed by the Coalition for Tobacco-Free Arizona.

The expenditures of AzTEPP reflect the political history of the program: \$9.7 million in fiscal year 1996, \$18.2 million in 1997, and \$28.2 million in 1998. Although the countermarketing campaign has expanded (with spending increasing from \$7.4 million in 1996 to \$13.2 million in 1998) (Riester and Linton 1988), the greatest expansion in the program has been in the scope and focus of the local programs (Meister 1998) (with funding increasing from \$1.7 million in 1996 to \$9.4 million in 1998). Recent program efforts have focused on all of the elements in the coalition’s draft comprehensive tobacco control plan (Meister 1998), thereby expanding its adult cessation activities (discussed at the fourth annual AzTEPP meeting in February 1999), but one of the factors that had been minimized in early health department efforts was

evaluation. Only recently have baseline data collection surveys been initiated (Meister 1998); as a result, no outcome data have been reported on the program, and subsequent evaluation efforts will be compromised by the lack of baseline data collected before the start of the multiple large-scale program efforts.

Respondents to an initial statewide telephone survey conducted in 1998 (Arizona Cancer Center 1998), about two and a half years after the media campaign's launch, reported that the advertising campaign, which stressed how damaging tobacco use is and how unappealing it is to the user, to peers, and to the opposite sex, had influenced their attitudes in the intended direction. For example, 80 percent of young people reported that the advertisements made them think about the negative aspects of tobacco use, and 58 percent of pregnant or postpartum women said the advertisements made them uncomfortable around smokers. Young people who had been exposed to the television advertisements in the previous 30 days were less likely to be susceptible to using tobacco than were youth who had not seen the advertisements. The campaign's impact on reported behaviors is less clear, especially among young people. Among respondents who were using tobacco at the start of the campaign, 23 percent of adults, 37 percent of pregnant or postpartum women, and 27 percent of young people said the advertising campaign had convinced them to try quitting. However, 23 percent of young people also reported that the campaign had convinced them to *increase* their tobacco use. Cummings and Clarke (1998) noted that such an unintended effect, if it is real, might represent young smokers' negative reaction to a narrowly focused youth campaign with no messages directed at changing broader social norms.

In response to a request from the Arizona Joint Legislative Audit Committee, the State Auditor General conducted a performance audit of the AzTEPP (State of Arizona, Office of the Auditor General 1999). This audit noted that evaluations of the state and local levels of programs have not yet produced an adequate assessment of the program's tobacco control efforts. Thus, the audit recommended that the program needed to improve its evaluations to measure its effectiveness in preventing youth from starting to use tobacco, encouraging and assisting tobacco users to quit, and reducing exposure to secondhand smoke. Specifically, the audit found that the program had been unable to establish a baseline on tobacco use among youth and had only preliminary assessments in place to assess cessation services. The program has established adequate methodologies to measure the prevalence of adult smoking; however, follow-up results are

not yet available. Thus, the audit concluded that "The program's evaluation approach to date leaves it far short of knowing whether its programs are working" (p-ii).

In response to this audit, the Arizona Department of Health Services (AzDOHS) has implemented changes in its surveillance and evaluation systems. Expanded surveillance systems for youth have been planned and will be implemented in 2000; however, no baseline data are available on youth smoking rates. For adults, a baseline survey of adults was conducted in 1996 and repeated in 1999. Using methodology similar to that used by the state BRFSS, the 1996 and 1999 Arizona Adult Tobacco Surveys were conducted by telephone interviews on representative samples of more than 4,500 adults in Arizona aged 18 years and older. Results from these surveys indicate that the prevalence of smoking among adults declined from 23.8 percent to 18.8 percent overall (AzDOHS 2000). Among adults aged 18 to 24 years, a significant decline was observed also, from 27.5 percent in 1996 to 21.0 percent in 1999. Both of these rates compare very favorably to national trends, where rates overall among adults have not declined in recent years and rates among younger adults have been increasing. Finally, smoking rates among Hispanics declined from 23.5 percent to 14.6 percent, which was the largest decline seen in any race/ethnic group in the state. Multiple other indicator variables suggest that these changes may be related to increases in smoke-free policies, advice from doctors and dentists, and exposure to television antismoking information. Finally, these declines in smoking prevalence are consistent with declines in per capita sales (Orzechowski and Walker 2000) that indicate that declines in Arizona since 1996 are larger than those observed in the rest of the country.

## Oregon

On November 5, 1996, Oregon voters approved Measure 44, raising the state cigarette excise tax from \$0.38 to \$0.68 (with a proportional increase in the tax rate on other tobacco products) and designating 90 percent of the increased revenue for the Oregon Health Plan (to expand insurance for medically underserved state residents) and the remaining 10 percent for a statewide tobacco prevention and education program managed by the Oregon Health Division. Survey data indicated that support for the initiative was increased by having the new revenue earmarked in this way (CDC 1997; Nicholl 1998). The Oregon campaign to place the initiative on the November 1996 ballot was initially led by the Committee to Support the Oregon Health Plan, which represented

primarily the private health care sector. Nonprofit and public health organizations added their support and worked in a loosely organized network led by the ACS. Later in the campaign, both groups combined efforts and resources. The measure had strong support from state media (receiving endorsements from all major newspapers and a majority of the smaller ones), from leading business groups, and from the governor, who conducted a three-day supportive media tour before the election.

The Oregon Health Division used its existing Oregon Tobacco Control Plan as the model for the new statewide program. Revenue from Measure 44 during the 1997–1999 biennium was projected to be \$170 million; of this, 10 percent (approximately \$17 million) per biennium was appropriated to fund the Tobacco Use Reduction Account administered by the Oregon Health Division. The resulting Oregon Tobacco Prevention and Education Program has eight elements: (1) local community-based coalitions, (2) comprehensive school-based programs, (3) statewide public awareness and education campaigns, (4) a cessation help line, (5) tribal tobacco prevention programs, (6) multicultural outreach and education, (7) demonstration and innovation projects, and (8) statewide leadership, coordination, and evaluation.

The 1997–1999 biennium budget for these eight elements is combined into five categories: (1) local coalitions—\$6.5 million (38 percent), (2) public awareness and education—\$4.6 million (27 percent), (3) statewide and regional projects—\$2.75 million (16 percent), (4) schools—\$2 million (12 percent), and (5) statewide coordination and evaluation—\$1.2 million (7 percent).

Evaluation data from Oregon indicate that the program has successfully implemented each of the program elements and is achieving its performance objectives (Oregon Health Division 1999). Local community-based coalitions were created in all 36 Oregon counties. Twenty-four school projects were funded, reaching 58 of the 198 (30 percent) school districts in the state. Surveys indicated that approximately 75 percent of adults and 84 percent of the young people recalled seeing the state's public awareness campaign. In January 1999, more than 1,500 Oregonians called the cessation help line. All nine federally recognized Indian tribes in Oregon are now receiving funding to implement prevention and education programs to reduce tobacco use. Multicultural outreach and education programs have been established for Hispanic, Asian/Pacific Islander, and African American populations in Oregon. Five demonstration projects have been funded focusing on pregnant women, health care delivery systems, and creative

ways to reach youth audiences. The program has also established a comprehensive and multifaceted surveillance and evaluation system and has strengthened program management.

Trends in per capita consumption in Oregon were compared with the remainder of the country (excluding California, Massachusetts, and Arizona) for the period before program implementation (1993–1996) and after (1997–1998). From 1993 to 1996, consumption increased 2.2 percent in Oregon and decreased 0.6 percent in the rest of the country (CDC 1999b). In 1997 and 1998, per capita consumption declined 11.3 percent in Oregon (from 92 to 82 packs per adult). Between 1996 and 1997, per capita consumption in the rest of the country declined only 1.0 percent (from 93 packs per adult to 92 packs per adult).

Smoking prevalence among adults in Oregon has been consistent with the observed declines in per capita consumption. Data from the BRFSS indicate that the prevalence of smoking among adults aged 18 years and older in Oregon declined from 23.4 percent in 1996 to 21.9 percent in 1998 (Oregon Tobacco Prevention and Education Program 1999). The proportion of women who smoked during pregnancy, as reported on state birth certificates, dropped from 17.7 percent in 1996 to 15.2 percent in 1998. Data suggest that smoking rates among young people are continuing to increase as in the rest of the country.

### **Maine**

In June 1997, the Maine legislature approved H.P. 1357, An Act to Discourage Smoking, Provide Tax Relief and Improve the Health of Maine Citizens, which increased the state cigarette excise tax from \$0.37 to \$0.74 and earmarked the increased revenue for the Tobacco Tax Relief Fund. The act established the Tobacco Prevention and Control Program within the Maine Bureau of Health and provided \$3.5 million in funding for fiscal years 1998 and 1999. The legislative effort to gain passage of the act was a combined effort of the state public health community, legislative leadership, and executive branch support.

The Bureau of Health has developed the Maine Tobacco Prevention and Control Program to expand the existing ASSIST program structure and to meet the legislative requirement of the 1997 state statute. The legislation specified that the program include an ongoing, major media campaign; grants for funding community-based programs; program surveillance and evaluation; and law enforcement efforts regarding transportation, distribution, and sale of tobacco products. The program's initial \$4.35 million annual

budget included \$1.6 million for a multimedia campaign, \$1.25 million for community and school grants, \$625,000 for statewide cross-cutting activities, \$400,000 for state staffing, \$400,000 for evaluation, and \$75,000 for enforcing youth access provisions.

In April 2000, legislation was passed in Maine that appropriated additional funds to expand the Maine Tobacco Prevention and Control Program; a total of \$18.3 million from the settlement is going to tobacco control. Of this total amount, \$8.35 million will be used for community and school-based grants, funding communities and schools to achieve the goal of reducing tobacco addiction and use and resulting disease, with a focus on those at highest risk such as youth and disadvantaged populations. About \$6.75 million will be used for cessation and statewide multimedia campaigns; \$1.2 million is for evaluation for independent program evaluation, research, and outcomes monitoring; \$200,000 funds five positions in the Bureau of Health for administering the programs; and \$1.8 million for improved prevention and treatment of tobacco-related diseases for those with Medicaid Insurance.

### **Programs Funded by State Settlements With the Tobacco Industry**

As was discussed earlier in this report (see "Legislative Developments" and "Master Settlement Agreement" in Chapter 5), all 50 states, the District of Columbia, and five commonwealths and territories have settled lawsuits with the tobacco industry to reclaim statewide costs spent treating Medicaid patients for diseases related to tobacco use. Four of those states settled their individual lawsuits with the industry—Mississippi in July 1997, Florida in September 1997, Texas in January 1998, and Minnesota in May 1998—and the remaining parties jointly settled in November 1998 in the multistate Master Settlement Agreement.

Because of a "most favored nation" clause (explained in "Recovery Claims by Third-Party Health Care Payers" in Chapter 5), the four separate settlements have been closely linked, particularly in how the terms of their awards affect the kind of comprehensive programs discussed in this chapter. Most notably, when the State of Florida received in its settlement \$200 million that was earmarked for a two-year pilot program to reduce tobacco use among young people, the State of Mississippi, though it had settled its lawsuit earlier, received \$62 million for the same type of pilot program specified in its lawsuit. Texas and Minnesota received no such additional

award, because their lawsuits did not specifically set aside funds for a parallel pilot program, although Minnesota received funds earmarked for smoking cessation and tobacco-related research. Language in the Texas and Minnesota settlements, however, released Florida and Mississippi from existing requirements to use their pilot program funding within two years and to direct their programs exclusively to young people.

Because program planning in Florida and Mississippi was already in place when the youth-only restriction was removed, an emphasis on preventing tobacco use among young people has been evident in their pilot programs' first years of activities. These activities are described in the next two sections of this chapter. Brief descriptions of settlement-funded plans in Texas and Minnesota follow. This report does not attempt to describe the various plans and legislative proposals that are developing (at the time of this writing) in the 46 states, the District of Columbia, and the five commonwealths and territories included in the joint settlement of January 1998.

### **Mississippi**

The Partnership for a Healthy Mississippi, a nonprofit corporation representing a broad range of public and private interests, plans and manages the state's pilot program. The program's mission is to create a youth-centered, statewide collaboration dedicated to fostering a healthier Mississippi and eliminating tobacco use among Mississippi youth. The partnership will award grants in five designated areas: (1) community/school/youth activities and partnerships, (2) law enforcement, (3) public awareness, (4) health care services and research, and (5) evaluation.

In the first year, with a budget of \$23.7 million, approximately 25 community and youth partnership coalitions were funded, and more are planned for the second year. Local coalitions—one-quarter of whose membership must be young people—are among the statewide and regional organizations supported by community assistance statewide partner grants to provide training, tobacco prevention activities for racial and ethnic minority groups, and other technical assistance. Specific programs that have been funded by the partnership are 4-H Youth Programs, Frontline (an advocacy organization for 14- to 18-year-olds), comprehensive school health programs, and a comprehensive school health nurses pilot project. In the first two years, \$4 million has been allocated to these activities.

The law enforcement program has awarded grants to municipalities to enforce the Mississippi Juvenile Tobacco Access Prevention Act of 1997. These

awards will range (according to population size) from a minimum of \$5,000 per municipality to a maximum of \$250,000. A total of \$12.65 million has been budgeted over the first two years of the program for these awards. The grants will require municipalities to conduct periodic enforcement checks on the illegal sale of tobacco to minors, provide retailer education programs, provide education programs in schools, organize youth partnerships, and work with community coalitions on enforcement issues. Other enforcement activities are being performed statewide by the Mississippi Attorney General's Office.

The partnership has budgeted \$12.5 million for a countermarketing media campaign and other public awareness activities to be conducted during the first two years. The health care services and research component focuses on nicotine addiction and cessation among young people. An expenditure of \$5 million is anticipated for the first and second years for training health providers in cessation counseling, for researching childhood and adolescent tobacco abuse, and for coordinating cessation services in the state, including a telephone help line. The Mississippi State Department of Health will manage the evaluation of the pilot program and will focus on program effectiveness in preventing initial tobacco use among young people, helping young people quit smoking, and reducing young people's exposure to ETS. An expenditure of \$2 million is anticipated for the first and second years' evaluation activities.

Since 1998, the Partnership for a Healthy Mississippi has managed the pilot program to reduce youth tobacco use through a seven-member Board of Directors ([www.healthy-miss.org](http://www.healthy-miss.org)) (McMillen et al. 1999). The major youth programs that have been implemented have included (1) the Reject All Tobacco (RAT) program among students in grades K-3, (2) the Students Working Against Tobacco (SWAT) Program for students in grades 4-7, and (3) the Frontline youth advocacy movement. Community programs have involved 26 community/youth partnership grants, targeted programs in collaboration with statewide organizations, and the school nurse program in 52 Mississippi school districts. Grants have funded 245 municipalities and 74 counties to empower the local law enforcement agencies to reduce sales to minors. Cessation services have included the Adolescent and Child Tobacco Treatment Center and a Mississippi Tobacco Quitline. Finally, a "Question It" public awareness campaign has focused on the 12- to 17-year-old audience.

The Mississippi State Department of Health has established a consortium of evaluation contracts involving multiple state universities to implement

program evaluation efforts. The overall coordination is being managed by the Social Science Research Center at Mississippi State University, with the evaluation of the media component conducted by the University of Mississippi, community programs conducted by Jackson State University, law enforcement component by Mississippi State University, and the school nurses component by Mississippi State University (McMillen et al. 1999). A baseline Social Climate Survey of Tobacco Control and Tobacco Use was conducted in 1999 among 3,040 adults aged 18 years and older that provided benchmark data on several social norm intermediate indicator variables (McMillen et al. 1999). Surveillance of youth tobacco use patterns is being conducted by the Mississippi State Department of Health. The Youth Risk Behavior Survey was conducted among students in grades 9 to 12 in 1993, 1995, 1997, and 1999 and among students in grades 6 to 8 and 9 to 12 in 1998 and 1999. Results indicate that in Mississippi, smoking rates among students in grades 9 to 12 had been increasing, as in the rest of country, between 1993 and 1997 (Mississippi State Department of Health 2000). Between 1997 and 1999, smoking rates among students in grades 9 to 12 appear to have stopped increasing and leveled off. Among students in grades 6 to 8, smoking rates did not decline between 1998 and 1999.

## **Florida**

Program planning and implementation initially were managed by the Governor's Office, with direct leadership provided by Governor Lawton Chiles, who was a party to the state's lawsuit and a member of the small team who negotiated the settlement agreement. The Florida Tobacco Pilot Program is now managed by the Office of Tobacco Control within the Florida Department of Health. The program has sought the input of Florida youth in planning the program focus and materials and in working toward the main goals of changing young people's attitudes about tobacco use, increasing youth empowerment through community involvement, reducing young people's access to tobacco products, and reducing youth exposure to ETS. These four goals will be addressed through program components similar to those of the Mississippi program:

- Marketing and communications initiatives are planned to directly counter the tobacco industry's marketing efforts. A commercial advertising firm, working closely with teen advisors, has developed the "Truth" campaign, a direct attack on the image of smoking as cool and rebellious. The campaign's multichannel approach—based on techniques used

by the tobacco industry—includes television, print, and billboard advertising, as well as consumer items, such as “Truth”-imprinted T-shirts and stickers.

- Youth programming and community partnership activities recruited young people to a Teen Tobacco Summit in early 1998 to advise on the overall development of the program. Chapters of Students Working Against Tobacco are currently active in all 67 counties.
- Education and training programs focus on school-aged children. Conducted in partnership with communities, schools, voluntary agencies, professional organizations, and universities, these programs ensure that effective tobacco prevention curricula are presented in middle and high schools across the state and that tobacco prevention strategies are being implemented in grades K–12 in conjunction with the Sunshine State Standards.
- Enforcement initiatives are aimed at improving Florida's efforts to reduce the accessibility of tobacco products to minors. The Florida Department of Business and Professional Regulation, Division of Alcoholic Beverages and Tobacco, provides enforcement, educational, and marketing initiatives to ensure compliance with all tobacco laws.
- The evaluation and research component monitors the performance of each of the program initiatives and the progress of the overall program in meeting goals and objectives. Under the leadership of the Florida Department of Health, and with the consultation of the University of Miami, baseline data were collected by Florida universities in all major areas before the pilot program began in early 1998.

In the first full year of operation, the program budget was approximately \$70 million, with program component allocations of approximately \$26 million for marketing and communications, \$10 million for youth programming and community partnerships, \$13 million for education and training, \$8.5 million for enforcement, and \$4 million for evaluation and research. An additional \$5 million was budgeted for programs targeting minority populations and \$3.5 million for administration and management. In the second year, approximately \$45 million more was appropriated for program operations; however, there were significant unexpended funds from the first year of operations that enabled major program components, such as the marketing and communications activities, to continue a level of expenditure similar to the first year.

### *Youth Tobacco Use Prevalence*

Between 1998 and 1999, the prevalence of current cigarette use among middle school students (grades 6 to 8) declined from 18.5 to 15.0 percent (CDC 1999c). Among high school students (grades 9 to 12), current cigarette use declined from 27.4 to 25.2 percent. However, these declines were significant only for non-Hispanic white students; the change in current smoking among non-Hispanic black and Hispanic middle and high school students was small and non-significant. Current cigar use declined significantly only for middle school students (from 14.1 to 11.9 percent), and this decline was almost entirely among males. Similarly, current smokeless tobacco use declined only among middle school students (from 6.9 to 4.9 percent) and remained unchanged among high school students.

In early 2000, additional declines in youth tobacco use were observed (Florida Department of Health 2000). Current cigarette use among middle school students declined to 8.6 percent, or an overall 54-percent decline since the 1998 baseline. Among high school students, current cigarette use declined to 20.9 percent, or an overall 24-percent decline since the 1998 baseline. Although declines between 1998 and 1999 were significant only for non-Hispanic white students, the declines observed in 2000 were significant among all racial/ethnic groups, except among the non-Hispanic black and “other” categories of high school students. Declines in current tobacco use, which include the use of cigars and smokeless tobacco, also were significant. Since the 1998 baseline survey, current cigar use declined by 46 percent among middle school students and 21 percent among high school students. Smokeless tobacco use declined by 54 percent among middle school students and by 19 percent among high school students. Declines in current tobacco use were consistent across grade, gender, and ethnicity as well.

Using additional data collected as part of the overall program evaluation, the Florida Tobacco Control Program has connected the declines in youth smoking prevalence with program activities (University of Miami 1999). Results suggest that students who reported receiving elements of a comprehensive tobacco use prevention education in school had greater declines in smoking between 1998 and 1999 than those students who reported not receiving such education in school. Similarly, the Community Partnerships in the 67 Florida counties were classified as “excellent,” “average,” or “needing improvement” based upon program record data, and these ratings were linked to data from the Florida Youth Tobacco Survey for

1998 and 1999 in those counties. Declines in smoking prevalence were related to the classification, with the greatest declines among middle and high school students in counties rated as "average" or "excellent." Similar ratings of counties on the level of local enforcement of youth access laws were related to youth smoking prevalence, with the highest levels of enforcement in counties with the lowest prevalence. Finally, data from the Florida Anti-Tobacco Media Evaluation (FAME) have indicated that the "Truth" campaign is producing impressive awareness among youth and changes in attitudes and knowledge consistent with the campaign themes. Between 1998 and 1999, the prevalence of Florida youth aged 16 years and under with antitobacco attitudes increased from 59 to 64 percent but decreased slightly nationwide.

National data against which to compare the Florida data from 1998 and 1999 are not yet available, but some data suggest that the prevalence of tobacco use among young people may have peaked nationwide and could be starting to decline (University of Michigan 1998). In addition, the impact of state excise tax increases that have occurred since the 1998 baseline data collection might be assessed.

### *Adult Smoking Prevalence*

In 1998, the Florida Behavioral Risk Factor Surveillance System (BRFSS) expanded its assessment of tobacco issues. The tobacco module will enable changes to be assessed in tobacco use prevalence, cessation behaviors, family rules about tobacco use, environmental tobacco smoke exposure at home, and workplace policies regarding smoking.

### **Texas**

The legislative plan developed by the Texas Interagency Tobacco Task Force (1998) incorporated the CDC recommendations for community and school-based programs to reduce tobacco use. The plan includes a public awareness campaign, cessation and nicotine addiction treatment, programs for diverse or special populations, enforcement of laws to reduce minors' access, surveillance and evaluation, and statewide program administration. The plan requests \$20.75 million for fiscal year 2000 and \$61.25 million for fiscal year 2001 to implement, evaluate, and administer the programs proposed.

In the fall of 1999, the Texas legislature created an endowment fund of \$200 million and requested the Texas Department of Health to conduct a pilot study based upon recommended interventions included in the 1998 tobacco task force plan. This pilot would be

funded by investment revenue from the endowment fund, approximately \$9 million per year. In response to this requirement, the Texas Department of Health has begun an Intervention Effectiveness Pilot Study in conjunction with universities in the state.

To assess the impact of tobacco use prevention activities in the state, the Texas Department of Health has conducted the Texas Youth Tobacco Survey in 1998 and 1999 among middle and high school students from a sample of students statewide and in eight regions of the state. Results from the 1998 survey indicated 31 percent of middle school students and 43 percent of high school students were currently using some form of tobacco products (Texas Department of Health). For cigarettes alone, 21 percent of middle school students and 33 percent of high school students were current smokers.

### **Minnesota Settlement Program**

In Minnesota, the Minnesota Partnership for Action Against Tobacco, the Tobacco Work Group of the Minnesota Health Improvement Partnership, and the Minnesota Blue Cross and Blue Shield (which received a separate \$469-million settlement award [see "Recovery Claims by Third-Party Health Care Payers" in Chapter 5]) all have developed plans for the statewide effort to reduce tobacco use. In the 1999 Omnibus Health and Human Services appropriation bill, the Minnesota legislature set aside \$968 million from the state's tobacco settlement to establish two health-related endowments: one for preventing tobacco use and supporting local public health efforts (\$590 million) and the other for tobacco-related medical education and research (\$378 million). The interest earned from these endowments will support long-term programs.

The 1999 Minnesota Omnibus Health and Human Services bill established an ambitious goal to reduce tobacco use among young people by 30 percent by the year 2005. In response to this, the Minnesota Department of Health developed the *Minnesota Youth Tobacco Prevention Initiative: Strategic Plan* (Minnesota Department of Health 1999). This plan defined major activities that will be funded from January 1, 2000, through June 30, 2001, in four component areas: Statewide Public Information and Education Campaign, Statewide Programs, Community-Based Prevention Programs, and Youth Leadership Projects. The strategic plan established "initial indicators of success" for each program component to enable program performance to be assessed.

The Statewide Public Information and Education Campaign will have a proposed budget of \$7.5

million for the 18-month period. The campaign will include both a media component and grassroots organizing efforts focused on the target audience of 12- to 17-year-old youth. The Statewide Programs will be budgeted at \$3.55 million for the initial 18-month period. Evaluation activities, training, and technical assistance services will be funded along with statewide organizations to support the community-based efforts. The Community-Based Prevention Programs will be budgeted at \$4.4 million for the initial 18-month period. Community-based prevention efforts will include tobacco-use prevention activities at the local level and projects that focus on populations at risk. Finally, the Youth Leadership Projects will be budgeted at \$1 million for the initial 18-month period and will work in conjunction with the community-based prevention efforts. These activities will seek to empower Minnesota's youth to take leadership in the planning and implementation of tobacco prevention and control programs at the local level. The Minnesota Department of Health has established an evaluation plan to track progress of the initiative, with the first comprehensive report on program effectiveness to be delivered to the legislature in January 2003.

### **Programs Meeting the Needs of Special Populations**

The recent Surgeon General's report *Tobacco Use Among U.S. Racial/Ethnic Minority Groups* provided a summary of the various approaches that have been used to prevent and control tobacco use among racial/ethnic minority groups in the United States (USDHHS 1998). This report highlighted the need for more research on the effect of culturally appropriate programs to address this problem. Few new findings have emerged since the publication of that report; hence, the elimination of disparities in health among population groups remains hampered by the lack of culturally appropriate programs of proven efficacy. Below are some examples of community-based interventions that have proven to be effective and that may serve as examples for the development of future program initiatives.

Uniting and mobilizing the movement to reduce tobacco use among racial/ethnic groups have not been easy. Tension frequently occurs between various organizations within the community regarding appropriate strategies to achieve particular goals, "turf" disagreements, competition for fund-raising dollars, and other issues. Many of these problems were identified during the 1989–1992 COMMIT trial. Though COMMIT researchers did not attribute to internal dissension the

program's inability to reach its goals (Thompson et al. 1993), internecine rivalry can splinter community mobilization efforts and greatly impair the effectiveness of any program trying to reduce tobacco use.

Diverse views and dissent are an expected part of organizing activity. A more serious issue for community mobilization has been a lag in engendering support from all segments of society. Historically, the movement to reduce tobacco use has been dominated by organizations composed of middle- and upper-class white Americans and often led by white males (see Chapter 2). For many years, participation in the movement was further limited to organizations concerned with health and medical issues and nonsmokers' rights.

In the early 1980s, increasing dissatisfaction was voiced by women and underrepresented communities who felt that their issues and contributions were not adequately integrated into mainstream efforts to reduce tobacco use (Jacobson 1983). In recent years, a number of persons and organizations representing more diverse perspectives have assumed a greater role (see the text boxes "Uptown," "X," and "Dakota"). Particularly in view of the tobacco industry's targeted marketing to women, African Americans, Hispanics, and young people (USDHHS 1994, 1998), such heightened activity is of critical importance to ensure a nonsmoking norm within diverse communities. In some instances—exemplified by the low and declining smoking prevalence among African American youth (USDHHS 1994)—such a norm may have already taken hold.

### **Programs for the African American Community**

Several leadership groups, such as the National Black Leadership Initiative on Cancer, which is funded by the NCI, and the National Association of African Americans for Positive Imagery, funded in part by the CDC, have begun to have a voice in activities to reduce tobacco use in the African American community. For example, in 1989, a strong coalition guided community mobilization efforts to mount a successful campaign against the test-marketing of Uptown, a new brand of cigarettes targeting African Americans (see the text box "Uptown"). A similar community-organized campaign in 1995 resulted in the withdrawal of X, another new brand seemingly intended for the African American community (see the text box "X").

In 1992 and 1993, the ACS provided funds for community demonstration projects to use *Pathways to Freedom: Winning the Fight Against Tobacco*, a self-help guide for African American smokers (Robinson et al.

## Uptown

In mid-December 1989, R.J. Reynolds Tobacco Company announced that on February 5, 1990, it would begin test-marketing a new cigarette in Philadelphia, Pennsylvania. The cigarette, to be named Uptown, was the first to be marketed directly to African American smokers. Within 10 days of this announcement, the Coalition Against Uptown Cigarettes (CAUC) was formed. Using existing church and community organizations and word of mouth, the coalition grew to include 26 diverse organizations representing health, religious, and community groups. The group's leaders were African Americans with long-standing ties to the Philadelphia African American community. The Philadelphia chapter of the National Black Leadership Initiative on Cancer, an organization funded in part by the National Cancer Institute and dedicated to reducing cancer in the African American community, and the Committee to Prevent Cancer Among Blacks facilitated the coalition's formation. Also active in the CAUC were several other organizations that addressed local issues on cancer control. These groups included chapters of the American Cancer Society and the American Lung Association, as well as the Fox Chase Cancer Center.

The CAUC decided that its initial goal would be to limit R.J. Reynolds' ability to use Philadelphia as a test market by convincing African American smokers to boycott the new cigarette. The coalition mobilized both smokers and nonsmokers in support of this goal by focusing on R.J. Reynolds' strategy to promote tobacco use among African Americans. The coalition initially used local media to reinforce the messages being sent through grassroots channels and did not seek out national coverage, which the coalition members believed would hinder their goal of

building a local, grassroots constituency. On behalf of the CAUC campaign, Dr. Louis Sullivan, then Secretary of Health and Human Services, addressed the University of Pennsylvania School of Medicine on January 18, 1990. In his remarks, Secretary Sullivan said that "at a time when [African Americans] desperately need the message of health promotion, Uptown's message is more disease, more suffering and more death for a group of people already bearing more than its share of smoking-related illness and mortality" (quoted in Heller 1990, pp. 32-3).

The national media embraced the story. Secretary Sullivan's remarks were prominently featured in the evening news and were front-page headlines across the country. R.J. Reynolds initially responded by defending their targeted marketing strategy, but the company later claimed that Uptown was not aimed specifically at African Americans. On January 19, 1990, R.J. Reynolds canceled the Philadelphia test-marketing of Uptown. On January 31, 1990, the company canceled production of the cigarette.

The course of events suggests that the Uptown coalition played a decisive role in altering R.J. Reynolds' targeting strategy. A united response from Philadelphia's African American community, an organized local grassroots effort, the strategic alliance with a national figure, and media management were associated with product cancellation less than two months after introduction. The episode highlights the importance of timing in measures to reduce tobacco use. In this instance, a marketing campaign appears to have been derailed in its beginning stages by short-term, high-intensity media advocacy (see "Media Advocacy," later in this chapter).

1992). Awardees used *Pathways to Freedom* to bring tobacco control efforts to the African American community. Through these demonstration projects, many ACS divisions began or enhanced their work in the African American community.

A recent study in three predominately low-income, African American neighborhoods has demonstrated that culturally appropriate interventions can produce significant declines in smoking behaviors (Fisher et al. 1998). The Neighbors for a Smoke Free

North Side organized residents in wellness councils to encourage nonsmoking in their areas. A citywide advisory council, composed mostly of African Americans, carried out central planning for the program and provided linkages to community resources and technical assistance to neighborhood councils. The program implemented a wide range of activities over a 24-month period, including smoking cessation classes, billboard public education campaigns, door-to-door campaigns, and a "gospelfest." A quasi-experimental

## X

In early 1995, the memory of the grassroots victory against Uptown cigarettes (see the previous text box, "Uptown") served as a rallying cry in the African American community in Boston against the potential threat of a new brand—X cigarettes. As with Uptown in Philadelphia, the first information about this cigarette brand came in local media—in X's case, in articles in the *Boston Globe* and the *Boston Herald*.

This distinctive menthol cigarette brand was packaged in the Afrocentric colors red, black, and green and featured a prominent "X," a symbol frequently associated with the well-known, deceased African American leader Malcolm X. Community leaders in Boston and throughout the United States thought that the product had the potential to attract young African Americans—a group whose smoking rates had dropped dramatically in recent years. The use of "X" on a cigarette brand also was seen as a defamation of Malcolm X, a noted nonsmoker. Although manufactured and distributed by two companies without large marketing budgets, there was a fear that even a small success with X cigarettes would stimulate the creation of similar products by the major tobacco companies, which would have significant resources for advertising and promotion in African American communities.

The National Association of African Americans for Positive Imagery (NAAAPI) and the Boston-based organization Churches Organized to Stop Tobacco took the lead in opposing X cigarettes. Two NAAAPI leaders, Reverend Jesse W. Brown, Jr., and

Charyn D. Sutton, both of whom had been involved in the Coalition Against Uptown Cigarettes, spoke in Boston in February 1995 about the need for communities to mobilize against tobacco marketing. Their visits were covered extensively by print and broadcast media. As a result of NAAAPI's organizing efforts, the manufacturer and distributor of X cigarettes received calls from around the country, most notably from the organizations involved in the African American Tobacco Education Network of California.

Because the brand's marketing seemed to be confined to the Boston area, NAAAPI decided to demand in writing that X cigarettes be withdrawn immediately to prevent any wider distribution. The manufacturer (Star Tobacco Corporation, Petersburg, Virginia) and distributor (Stowcroft Brook Distributors, Charlestown, Massachusetts) both responded within 10 days to that request, although they continued to insist that the cigarette brand had not been specifically targeted to the African American community. On March 16, 1995, news conferences were held in Boston and Los Angeles by tobacco advocates to announce the withdrawal of X cigarettes from the market.

The course of events suggests that the actions of activist groups had direct influence on the outcome. As was the case with the Uptown protest, the X experience suggests the critical role of a rapid but organized community response in efforts to prevent the targeted marketing of tobacco products to racial and ethnic minority groups.

design was used to evaluate the impact of this program. The three intervention neighborhoods in St. Louis were matched by ethnicity, income, and education with three comparison zip code areas in Kansas City, Missouri. Baseline and follow-up random-digit dialing telephone surveys were conducted among adults (aged 18 years or older) in the three intervention and three comparison areas in 1990 and in 1992. Smoking prevalence declined significantly in the St. Louis neighborhoods, from 34 to 27 percent, but declined only slightly in the Kansas City comparison areas, from 34 to 33 percent. Thus, the results of this trial suggest that a culturally appropriate community-organizing approach to smoking cessation that

emphasizes local authority and involvement in program planning can have a significant impact on the smoking behavior among residents of low-income, African American neighborhoods.

### Programs for Women

The Women vs. Smoking Network, a project of the Advocacy Institute, was the first national network of women's organizations and women's leaders to focus on reducing tobacco use among women. With financial support from the NCI, the network provided technical assistance and information to women's organizations in an effort to interest them in the movement

to reduce tobacco use. The network also focused on obtaining media coverage for issues concerning women and smoking. The network's most notable effort was the release of a plan by R.J. Reynolds to market cigarettes to young, uneducated women (see the text box "Dakota"). Subsequent media attention made this one of the most widely covered tobacco stories of 1990 (Pertschuk 1992). The network was short-lived (1989–1991), however, because of lack of funding. The International Network of Women Against Tobacco (INWAT) was established in 1990 as an international organization to counter the marketing and promotion of tobacco products to women and to foster the development of programs for the prevention and cessation of tobacco use among women. Through support from the American Public Health Association, INWAT has worked to draw attention to issues concerning women and tobacco and has sought to unite and inform women's advocates around the world. As a record of its Herstories project, INWAT assisted in preparing an issue of *World Smoking and Health* (INWAT 1994) that was a collection of brief essays about the role of tobacco in women's lives in various countries. INWAT has also published and distributed an international directory that lists women who are advocates for reducing tobacco use and includes their areas of specialization (American Public Health Association 1994). The National Coalition for Women Against Tobacco, whose sponsoring organization is the American Medical Women's Association, provides educational materials and advocacy messages to counteract tobacco industry marketing and combat tobacco use among women and girls (<http://www.womenagainst.org>).

### Federal and State Programs

At the federal level, the CDC's IMPACT program awarded three-year cooperative agreements in 1994 to selected national organizations to enhance their work in reducing tobacco use at the national, state, and local levels. Organizations were chosen on the basis of their ability to provide services and outreach to young people, women, blue-collar and agricultural workers, African Americans, Hispanics, Asian Americans and Pacific Islanders, and American Indians.

Among the states, California has made a concerted effort to involve racial and ethnic minority groups and women in its efforts funded—by Proposition 99—to reduce tobacco use (see the section on California, earlier in this chapter). In 1990, four organizations were funded to form networks among Hispanics, African Americans, Asian Americans and Pacific Islanders, and American Indians. Members of the networks convene

meetings, share experiences, participate in the development of culturally appropriate materials, and help community organizations reach their respective communities. These networks currently conduct programs and campaigns to build a strong statewide coalition among their respective populations (Tobacco Education Oversight Committee 2000). California also has funded a statewide organization, Women and Girls Against Tobacco, to focus on tobacco product marketing that targets females. Created in 1992, the organization focuses on empowering women's and girls' organizations to divest themselves of tobacco industry sponsorship and funding and on eliminating tobacco advertising in leading magazines with readership among young women (Women and Girls Against Tobacco, n.d.).

### Religious Organizations

Although not specifically representative of minority or underserved groups, some religious organizations that have an important impact in minority communities have had long-standing involvement in issues related to reducing tobacco use. The Interfaith Center on Corporate Responsibility, a coalition of 250 Roman Catholic and Protestant institutional investors, pioneered the corporate responsibility movement in the early 1970s. The value of their combined portfolios is estimated at \$40 billion. In 1981, the Province of St. Joseph of the Capuchin Order was the first member of the coalition to file a shareholder resolution with a tobacco company on the issue of smoking and health. Since then, the coalition has filed numerous shareholder resolutions with the major tobacco companies. These resolutions are a unique opportunity to engage in a public dialogue with executives of major tobacco companies; the shareholder meetings frequently receive media attention.

A more recent effort to involve religious organizations and thereby diversify efforts to reduce tobacco use is the formation of the Interreligious Coalition on Smoking OR Health. The stated purpose of the group is

to mobilize the faith communities in the United States to improve the effectiveness of public policy concerning tobacco. The Coalition is concerned with policies affecting United States corporations involved in the manufacture and sale of tobacco products. The primary focus of the Coalition is educating policy makers within both the legislative and executive branches of the United States federal government (Interreligious Coalition on Smoking OR Health 1993, p. 1).

## Dakota

The Women vs. Smoking Network, under the aegis of the Advocacy Institute, was a project aimed at informing and uniting women's organizations to oppose the tobacco industry's efforts to market its products specifically to women. In November 1989, the network sent a letter to the editor of more than 100 newspapers nationwide. Several newspapers printed the letter, which responded to a Philip Morris advertisement that had previously run in these newspapers as a mock apology to women for alleged "shortages" of their new cigarette, Virginia Slims Super. As a result, several major national papers and *ABC News* subsequently ran stories on tobacco advertising that targeted women. Soon thereafter, the controversy and media coverage surrounding the planned test-marketing of Uptown cigarettes to African Americans began (see the text box "Uptown"). In response, many journalists wrote stories on the related issue of targeted marketing to women. These stories prepared the public for the events that followed.

In February 1990, an anonymous source sent the Women vs. Smoking Network copies of confidential marketing documents for a new cigarette brand, Dakota. The cigarette, produced by R.J. Reynolds Tobacco Company, was scheduled for test-marketing in April 1990. The marketing documents, entitled "Dakota Field Marketing Concepts," consisted of more than 200 pages of test-marketing proposals from two different advertising firms. The marketing documents described Dakota, which was

code-named Project Virile Female, as a cigarette explicitly for young women (18–20 years old). The demographic and psychological profile prepared by Trone Advertising Inc. of the typical Dakota smoker described her as a "caucasian female, 18–20 years old, with no education beyond high school, working at whatever job she can get" (Butler 1990, p. 1, citing Trone Advertising Inc.). She aspired to have an ongoing relationship with a man and "to get married in her early twenties and have a family." She spent her free time "with her boyfriend doing whatever he is doing." The marketing documents also included specific promotional strategies to attract young women to the new cigarette.

Recognizing the value of the documents, staff of the Advocacy Institute negotiated with the *Washington Post* for front-page coverage of the story in exchange for initial exclusive release of what the institute staff called "Dakota Papers." The *Washington Post* ran the story on Saturday, February 17, 1990, with the headline, "Marketers Target 'Virile Female': R.J. Reynolds Plans to Introduce Cigarette" (Specter 1990). The Advocacy Institute held back further details on the documents until Tuesday, February 20, so that the director of the Women vs. Smoking Network could appear on *CBS This Morning* with Dr. Louis Sullivan, then Secretary of Health and Human Services, to "release" the story of the documents. Secretary Sullivan strongly condemned R.J. Reynolds' plans to target women in its marketing strategies.

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The coalition was formed in cooperation with leading organizations within the mainstream tobacco control community. As of January 1994, the coalition had enlisted 16 main religious organizations, including Catholic, Muslim, and Protestant denominations, in the effort to support a large increase in the federal excise tax on a pack of cigarettes (Interreligious Coalition on Smoking OR Health 1994).

### Special Efforts to Reduce Chewing Tobacco Use

In 1995, Oral Health America established the National Spit Tobacco Education Program (NSTEP),

an effort aimed at reducing the use of smokeless tobacco among youth in sports. Oral Health America teamed up former major league baseball players, such as Joe Garagiola, Hank Aaron, and Bill Tuttle, to help get the message out that smokeless tobacco products are not a safe alternative to smoking. The components of NSTEP include in-stadium events, public service announcements that have been televised during major league baseball games, printed materials, and educational videos. An external evaluation of NSTEP is being developed to address all levels of the program and its public health impact.

Significant successes of the program include the inclusion of spit tobacco on the national tobacco policy agenda, with specific credit to NSTEP and national