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Chapter 5

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Introduction

Various approaches have been used to prevent and control tobacco use among racial/ethnic minority groups in the United States. This chapter addresses six major approaches to tobacco control: (1) primary prevention efforts, (2) smoking cessation programs, (3) environmental tobacco smoke (ETS) and clean indoor air policies, (4) economic efforts to reduce tobacco use, (5) efforts to control tobacco advertising, and (6) tobacco product regulations (Satcher and Eriksen 1994). Each section presents a selection of interventions and focuses on activities that reflect the specific characteristics of given racial/ethnic groups.

Because most of these efforts are relatively new among racial/ethnic group members and many have been developed or applied in predominantly white communities, little information is available about the ease and feasibility of their implementation or replication in racial/ethnic contexts. Although data exist on the overall effectiveness of programs that do not differentiate racial/ethnic minority groups from whites, data are limited on the effectiveness of racial/ethnic-specific tobacco control efforts, because results of their evaluations are just beginning to appear in the literature. Although an increasing number of tobacco control programs are being implemented among various racial/ethnic groups, many of these programs lack evaluation components. To remedy the lack of information, culturally appropriate research and evaluations need to be conducted in the future, and more professionals need to be trained in culturally appropriate research and evaluation methodologies. Moreover, the types of tobacco control efforts that are most effective, easiest to implement, and most cost-effective among racial/ethnic groups must be identified (Fiore et al. 1996). In some instances, smoking cessation treatments that have been shown to be effective with non-Hispanic whites also have produced positive effects with racial/ethnic populations (Fiore et al. 1996). It is already well known that preventing tobacco use is of paramount importance because cessation is difficult.

Tobacco control infrastructures in white and racial/ethnic minority communities have developed differently, although the reasons are not well understood. This development has been influenced by many factors: immigration; the historical and current role of the tobacco industry in the economic, political, social, and cultural life of the community; and the resources invested in communities for research and the establishment of tobacco control programs (Robinson et al.

1995; Shelton et al. 1995). Robinson and colleagues developed an index to measure the capacity of racial/ethnic communities to engage in, develop, and implement tobacco control initiatives. The researchers then applied the index to racial/ethnic communities on a national level. They defined capacity in the index as being made up of four broad components, each of which is composed of numerous elements: (1) research, (2) infrastructure, (3) diffusion of programs, and (4) internalization of policy initiatives. The index assumes that a logical order exists among these components, that is, that a community's ability to gather data and assess its needs precedes program development and dissemination. During this process, it is likely that a community's capacity grows through the evolution of new leaders, establishment of more communication networks, and emergence of a deeper understanding and acceptance of community needs and interventions to meet those needs. Robinson and colleagues (1995) concluded that racial/ethnic communities have fewer resources and less infrastructure to develop and implement tobacco control initiatives than the white community. In addition, racial/ethnic communities were compared with one another, and findings demonstrated variability among communities. The index can be considered a preliminary but important step in providing a useful framework for evaluating the relative tobacco control capacity of racial/ethnic minority communities. Mature tobacco control infrastructures provide leadership, advocacy for a smoke-free environment, communication systems, established research initiatives, effective tobacco control programs, and environmental norms; these elements enable communities and their residents to counter tobacco industry marketing strategies and the appeal of an addictive substance.

Principles for Developing Culturally Appropriate Tobacco Control Strategies

To be culturally appropriate, interventions must properly reflect the characteristics of the group members; that is, programs must recognize that cultural groups—whether they are based on race/ethnicity, national origin, or other characteristics—are not monolithic entities. Behavior can be affected by not only demographic characteristics, such as gender, employment status, educational level, literacy, income, and

age but also such variables as national background (i.e., the place of birth of individuals, their parents, or grandparents); acculturation (with its correlates of generational history, time of migration, and language preference); and large social circumstances such as racism, discrimination, and poverty. In particular, and as discussed in Chapter 4, tobacco prevention and control strategies must respond to the historical context of racial/ethnic communities as well as to their current needs (Ellis et al. 1995). Those attitudes and behaviors that have been shaped by the historical relationship between the community on one hand and tobacco and the tobacco industry on the other need to be considered when tobacco control strategies are developed.

Although few tobacco control programs targeting racial/ethnic groups have been culturally appropriate, they are increasing, and their evaluation will further guide the development of culturally appropriate tobacco control strategies. Such programs would address these racial/ethnic groups' differing psychosocial and large social factors related to tobacco use.

Development of culturally appropriate interventions also must go beyond language translations and adaptations of materials (e.g., Rogler et al. 1987; Marín 1993; Bayer 1994) and should do more than simply include contemporary, group-specific traditions or ancestral symbols and traditions. In addition, planners should not assume that the involvement of community leaders and organizations will automatically guarantee a program's success. Marín (1993, p. 149) has argued that to be culturally appropriate, an intervention must meet these requirements: "(1) it is based on the cultural values of the group, (2) the strategies that make up the intervention reflect the subjective culture (attitudes, expectancies, norms) of the group, and (3) the components that make up these strategies reflect the behavioral preferences and expectations of the group's members."

Recent studies have identified numerous intergroup differences in beliefs, attitudes, expectancies, and norms that are useful in designing effective tobacco control programs by identifying optimal messages or techniques that are culturally appropriate. Racial/ethnic cultural values are often an asset in tobacco control efforts. For example, Marín and colleagues (1990a) found that Hispanic smokers were more likely than white smokers to think that an effective motivator to quit smoking was the knowledge that adults who smoke set a bad example for children and endanger children's health. According to Robinson and colleagues (1992), African Americans responded to the use of prayer during smoking cessation

programs, and Hodge and colleagues showed that American Indians were unresponsive to confrontational approaches for curtailing tobacco use (American Indian Cancer Control Project 1991). Materials developed for Chinese Americans have offered the use of martial arts as a behavioral alternative to cigarette smoking (Chinese Community Smoke-Free Project 1992). Another example of a culturally appropriate message is a billboard used by the California Department of Health Services to target Hispanics (Figure 1). The billboard makes use of a basic Hispanic value (*familialism*) within the context of a message that is an important motivator to Hispanics to quit smoking—quitting to protect the health of the family (Marín et al. 1989, 1990a). More recently, in an analysis of a population-based survey of Californians 18 years of age and older, researchers found that African Americans and Hispanics were more likely than whites to plan to quit smoking in the near future and to have tried to quit at least one time (Kaplan et al. 1993). In a comparison of smoking cessation intentions and behaviors among white and African American smokers, white smokers were more likely to set quitting smoking as a goal, whereas African Americans were more likely to focus on a goal of reducing the number of cigarettes they smoked per day or making other changes in smoking behavior (Hahn et al. 1990). Another study found that intentions to breast-feed predicted smoking cessation among African American pregnant women (O'Campo et al. 1992).

Other recent studies of smoking cessation programs indicate that members of most racial/ethnic groups tend to be very interested in quitting smoking. In the 1993 National Health Interview Survey (NHIS), current smokers in all racial/ethnic groups said they were willing to quit smoking (Table 1) (National Center for Health Statistics [NCHS], public use data tape, 1993). African Americans (71.4 percent) reported the desire to quit in greater proportions than members of the other racial/ethnic groups, whereas Asian Americans and Pacific Islanders (60.2 percent) showed the least interest in quitting. In all four racial/ethnic groups, women were more likely than men to want to stop smoking. Moreover, data from the Community Intervention Trial for Smoking Cessation's (COMMIT) initial survey in 10 U.S. communities showed that more African Americans than whites, both men and women, said they wanted "a lot" to quit (Royce et al. 1993). In a San Francisco study, Hispanics considered a high interest in quitting smoking to be more desirable than did whites (Marín et al. 1989).

Despite their interest in smoking cessation, members of these racial/ethnic minority groups have been

Figure 1. Billboard used by the California Department of Health Services in targeting Hispanics to quit smoking*



*Translation: If you smoke, she smokes.

Source: California Department of Health Services, Tobacco Control Media Education Campaign, Sacramento, 1993.

Table 1. Percentage of adult smokers who would like to stop smoking,* by race/ethnicity and gender, National Health Interview Survey, United States, 1993

Characteristic	African Americans		American Indians/ Alaska Natives		Asian Americans/ Pacific Islanders		Hispanics		Whites	
	%	±CI [†]	%	±CI	%	±CI	%	±CI	%	±CI
Total	71.4	4.8	65.0	14.6	60.2	12.2	68.7	5.8	70.4	1.8
Men	68.6	7.3	57.3	23.4	58.3	14.6	63.8	7.8	67.8	2.6
Women	74.9	5.4	70.3	16.1	65.3	22.6	79.3	8.1	72.4	2.1

*In response to the question, "Would you like to completely stop smoking cigarettes?"

[†]95% confidence interval.

Source: National Center for Health Statistics, public use data tape, 1993.

less likely than whites to actually quit. In a study of 786 adult smokers in the Minneapolis-St. Paul area, Hahn and colleagues (1990) found that 52 percent of African American men had tried to quit smoking in the previous year, compared with 63 percent of white men. They also found that 56 percent of African American women had tried to quit, compared with 58 percent of white women. In a recent survey conducted in California, African Americans, Asian Americans, and Hispanics were more likely than whites to report that they tried to quit smoking in the previous year; however, relapses were more common among African

Americans (49.5 percent), Asian Americans (39.8 percent), and Hispanics (37.8 percent) than among whites (35.0 percent) (Burns and Pierce 1992). NHIS data from 1991 that were statistically adjusted for gender, age, education, and poverty status indicate that African Americans and Hispanics were more likely than whites to quit for a day during the previous year but that African Americans who tried to quit were more likely than whites to relapse (Centers for Disease Control and Prevention [CDC] 1993b). In another study—conducted in Milwaukee, Wisconsin; Minneapolis, Minnesota; and Seattle and Spokane, Washington—

American Indians who were patients at Indian Health Service (IHS) clinics reported a moderate desire to quit smoking (mean of 5.97 on a scale of 0 to 10) but a high rate of relapse (70 percent) (Lando et al. 1992). These data suggest the need for culturally appropriate programs that not only help smokers stop smoking but also support them in their efforts to maintain a smoke-free lifestyle and to avoid relapses.

In addition to considering intergroup differences, tobacco control programs targeting members of racial/ethnic groups must involve culturally competent staff—persons with the academic and interpersonal skills needed to understand and appreciate racial/ethnic groups' cultural differences and similarities and to respect these groups' beliefs, attitudes, norms, and behaviors (Cross et al. 1989; Roberts 1990; Orlandi 1992). Such staff must have the skills to understand their own cultural beliefs and values, to understand the dynamics of cultural differences, and to translate that understanding into culturally appropriate behaviors. Cross and colleagues (1989) and Davis and Voegtle (1994) propose that culturally competent health care systems—and by implication culturally competent staff—should (1) be aware and accepting of cultural differences, (2) have the capacity for cultural self-assessment, (3) be conscious of the dynamics inherent when cultures interact, (4) have relevant cultural knowledge of the targeted group, and (5) have skills that promote adaptation to diversity. Other authors, such as Corcoran and Robinson (1994), assert that public health professionals need to actively include the community by establishing planning teams composed of key community leaders and that staff be willing to redefine the project as community needs change.

Furthermore, persons designing and implementing tobacco control programs ideally should determine whether theoretical models and approaches originally developed for certain populations would be relevant to the racial/ethnic groups being targeted. Most current theoretical approaches to health promotion have been developed by white researchers who work primarily with white populations. Some researchers have questioned the overall validity and usefulness of these theoretical approaches because the approaches that are developed do not necessarily reflect the cultural values shared by other racial/ethnic groups and do not consider how variables such as acculturation, racism, and poverty may affect peoples' health behaviors (Prochaska 1992; Robinson and Sutton, in press). This concern can be addressed only through an empirical approach that analyzes the usefulness of theories initially developed for groups other than the ones being targeted by an intervention (Orlandi 1992).

Information Needs

To ensure that prevention and cessation programs will provide members of a racial/ethnic minority group with the information that they need most, program designers must find out three things. (1) Do members of the community need basic information about the harmful health effects of tobacco use? (2) What culture-specific experiences directly influence the role of tobacco and the tobacco industry and how can they be addressed in health promotion messages? (3) Which media and information sources would be most effective in conveying information to the targeted group?

Because information about the dangers of cigarette smoking has been provided to the public for more than 30 years, most U.S. citizens and residents are well aware of these health consequences. American Indians, for example, tend to have a high level of knowledge about the hazards of smoking. In a study of 1,369 northern California American Indians who were patients at IHS clinics, Hodge and colleagues (1995) found that most American Indians knew about the health effects of tobacco use, particularly its relationship with cancer and the dangers of smoking while pregnant.

Conversely, this basic information may not have reached persons who have limited English proficiency, who have recently arrived in the United States, or who may not have been exposed to media and information sources that traditionally have carried messages about the dangers of cigarette smoking. It is possible for example, that Asian Americans, Pacific Islanders, and Hispanics who have recently immigrated to the United States are not familiar with the dangers of cigarette smoking. Less acculturated Asian Americans, Pacific Islanders, and Hispanics who have resided in the United States for several years may not have benefited from large-scale public education campaigns directed at persons who are proficient in English and those who interact frequently with mainstream society. To help address this need, the Agency for Health Care Policy and Research translated the consumer cessation guide "You Can Quit Smoking" into Cambodian, Laotian, Vietnamese, Tagalog, Korean, and Chinese (U.S. Department of Health and Human Services [USDHHS] 1996 and 1997). Chen and colleagues (1993) reported that less than 40 percent of Cambodian, Laotian, and Vietnamese smokers in Columbus, Ohio, had heard that smoking caused heart disease. Earlier, Jenkins and colleagues (1990) reported that only 74 percent of Vietnamese adults surveyed in San Francisco knew that smoking caused cancer. Nevertheless, Campbell and Kaplan (1997) found that both less acculturated and more acculturated Hispanic women (as measured by language orientation) agreed that cigarette smoking is harmful

to children's health. However, less acculturated Hispanic women were more likely to agree that it is safe to smoke for a year or two.

Even long-term U.S. residents who have been receiving information on the dangers of tobacco smoke for many years may have limited or incorrect information. For example, in a study of Chicago women living in subsidized housing, 46 percent of African American women agreed that the chances of getting lung cancer were the same for smokers and nonsmokers, compared with 27 percent of white women (Manfredi et al. 1992). In that study, African American women also reported that the causes of lung cancer were unknown or that lung cancer was the result of environmental pollution (Lacey et al. 1993). Conversely, in a multivariate analysis, African Americans compared with whites were found to have higher levels of knowledge about the benefits of not using tobacco and the health consequences of tobacco use, but blue collar status emerged as the most significant predictor of lower levels of knowledge (Robinson et al. 1991). In another study, African American residents of urban Missouri areas recognized the harmful effects of ETS but were less likely than whites to know the health risks associated with active smoking, particularly its link with heart disease (Brownson et al. 1992).

In a 1989 survey of Hispanic and white clients of a San Francisco health maintenance organization (HMO), Hispanics had numerous misconceptions about the causes of cancer, but a similar proportion of Hispanics (97.5 percent) and whites (98.4 percent) knew that cigarette smoking caused cancer (Pérez-Stable et al. 1992). Similarly, Vander Martin and colleagues (1990) surveyed patients of primary care physicians and found that African Americans (87.8 percent) and Asian Americans (86.5 percent) were significantly less likely than whites (92.1 percent) and Hispanics (91.6 percent) to recognize that cigarettes had harmful health effects. They also found that African American (58.9 percent), Asian American (56.3 percent), and Hispanic (60.1 percent) smokers were less likely than white smokers (80.3 percent) to recognize that they were addicted to cigarettes. In the 1992 NHIS, members of racial/ethnic groups were generally less likely than whites to indicate concern over the carcinogenic characteristics of cigarette smoking, although they expressed the same level of agreement as whites regarding the need for pregnant women not to smoke and about the harmfulness of ETS (Table 2) (NCHS, 1992 Cancer Control Supplement, public use data tape). In addition, racial/ethnic group members were less likely than whites to believe that there were health benefits to quitting smoking.

Once program planners decide what information needs to be conveyed, they must consider which media would be most effective in reaching the targeted audience. Many researchers have suggested employing the media most frequently used by the targeted ethnic group. To reach African American smokers, for example, Stotts and colleagues (1991) suggest that smoking cessation programs should use African American broadcast and print media to address this group's information and motivational needs.

Moreover, prevention and cessation programs should use the information channels (e.g., radio, television, and newspapers) and information sources (e.g., physicians, peers, and actors) that members of the targeted racial/ethnic group perceive to be trustworthy and reliable. Unfortunately, little is known about how credible the various media and information sources are perceived to be by members of racial/ethnic groups. In one of the few studies focusing on this issue—research involving African Americans in Columbia, South Carolina; Durham, North Carolina; Hartford, Connecticut; and Springfield, Massachusetts—television was perceived as the most trustworthy information channel (by 70 percent of participants), followed by newspapers (59 percent), radio (53 percent), and magazines (53 percent) (Cernada et al. 1989–1990). A recent study among Hispanics (Marín 1996) showed that the most credible channels for disseminating information about cigarette smoking among Hispanics are (in descending order) books, newspaper articles, pamphlets, magazine articles, and television news shows; the least credible were *fotonovelas* (illustrated comic-book type of booklet targeting adults) and *telenovelas* (Spanish-language soap operas). The same study found that the most credible sources of cigarette smoking information among Hispanics were (in descending order) a physician, a cancer patient, and a peer of the respondent; the least credible sources of information were a politician, a singer, an actor, and a child.

Research and Development Limitations

In a recent analysis of racial/ethnic minority groups' expertise for engaging in tobacco control efforts, Robinson and colleagues (1995) suggested that African American, American Indian, Alaska Native, Asian American, Pacific Islander, and Hispanic groups all have been significantly limited in conducting research and developing program and policy initiatives for tobacco control. According to Robinson and colleagues, these limitations may exist, in part, because racial/ethnic groups tend to have fewer resources for tobacco control activities than whites.

Table 2. Adults' beliefs about the health effects of smoking, by race/ethnicity, gender, and smoking status, National Health Interview Survey, United States, 1992

Characteristic	African Americans		American Indians/ Alaska Natives		Asian Americans/ Pacific Islanders		Hispanics		Whites	
	%	±CI*	%	±CI	%	±CI	%	±CI	%	±CI
So many things cause cancer that it does not really matter if you smoke.										
Overall										
Total	28.6	3.0	25.6	9.6	27.3	7.0	30.7	3.0	16.5	1.0
Men	27.8	4.7	30.7	14.1	25.2	10.5	28.1	4.3	18.0	1.5
Women	29.3	3.6	21.3	11.3	29.3	8.4	33.2	3.9	15.2	1.2
Nonsmokers										
Total	25.2	3.6	18.7	7.8	22.9	6.6	25.4	3.1	10.9	1.0
Men	23.7	6.2	19.9	14.6	15.3	9.2	23.3	4.6	11.8	1.5
Women	26.3	4.1	17.7	11.0	28.1	8.6	27.3	4.1	10.0	1.2
Smokers										
Total	38.2	5.6	39.4	21.9	47.6	18.9	50.5	7.0	32.5	2.3
Men	36.4	7.9	54.1	28.5	45.9	21.0	43.3	9.2	33.7	3.2
Women	40.2	7.3	27.4	24.2	64.9	34.7	58.8	9.9	31.2	3.1
Smoking by a pregnant woman may harm the baby.										
Overall										
Total	90.7	1.7	90.8	6.1	92.3	3.9	92.0	1.9	92.5	0.7
Men	90.5	2.6	86.0	10.4	91.9	6.3	92.9	2.7	91.4	1.0
Women	90.9	2.0	94.9	6.4	92.6	4.7	91.2	2.4	93.5	0.8
Nonsmokers										
Total	92.6	1.7	94.5	5.2	92.2	4.5	93.2	2.0	94.9	0.6
Men	92.2	2.7	87.8	10.5	91.1	8.8	92.5	3.2	93.7	1.0
Women	92.9	2.2	100.0	0.0	93.0	4.8	93.8	2.4	96.0	0.7
Smokers										
Total	90.1	2.9	89.1	11.6	94.3	6.1	92.1	4.2	89.5	1.5
Men	90.1	4.0	92.7	14.3	95.6	6.1	95.0	4.7	88.5	2.2
Women	90.2	3.8	86.2	17.4	81.2	24.7	88.8	6.9	90.5	1.8
The smoke from other people's cigarettes is harmful to you.										
Overall										
Total	82.1	2.2	79.8	9.1	80.3	6.2	86.7	2.2	85.2	0.9
Men	81.5	3.4	77.1	16.2	83.8	7.4	85.4	3.4	82.8	1.4
Women	82.7	2.7	82.2	10.9	76.9	9.4	87.9	2.7	87.4	1.1
Nonsmokers										
Total	89.7	2.0	94.9	4.2	81.1	7.1	89.8	2.3	91.6	0.8
Men	90.0	3.2	92.8	6.0	86.1	9.4	88.9	3.5	89.7	1.3
Women	89.4	2.4	96.6	6.5	77.6	9.8	90.6	2.8	93.4	0.9
Smokers										
Total	66.8	5.2	57.6	20.8	78.4	11.7	80.0	5.1	71.0	2.2
Men	67.8	7.0	57.8	29.7	80.6	12.5	76.3	7.9	68.4	3.1
Women	65.7	7.5	57.4	29.5	56.4	36.4	84.3	6.1	73.7	2.9

*95% confidence interval.

Source: National Center for Health Statistics, 1992 Cancer Control Supplement, public use data tape.

Table 2. Continued

Characteristic	African Americans		American Indians/ Alaska Natives		Asian Americans/ Pacific Islanders		Hispanics		Whites	
	%	±CI	%	±CI	%	±CI	%	±CI	%	±CI
Most deaths from lung cancer are caused by cigarette smoking.										
Overall										
Total	73.7	2.9	79.3	10.4	77.1	6.1	77.4	2.8	75.0	1.1
Men	74.9	4.6	75.5	15.6	79.9	8.4	76.7	4.3	73.9	1.7
Women	72.8	3.4	82.6	10.5	74.3	8.7	78.2	3.5	76.1	1.3
Nonsmokers										
Total	80.0	2.9	84.6	9.0	79.1	6.8	79.4	3.2	81.7	1.1
Men	81.6	5.2	71.2	18.0	83.4	10.2	78.5	4.9	80.3	1.7
Women	78.8	3.5	95.6	5.8	76.1	8.8	80.3	3.7	82.9	1.4
Smokers										
Total	61.5	5.6	74.1	18.4	69.4	14.2	73.8	6.2	59.8	2.3
Men	64.6	7.6	91.2	16.8	74.5	14.6	71.8	8.8	60.4	3.5
Women	57.7	7.7	60.3	28.6	19.1	25.3	76.2	7.8	59.3	3.1
Even if a person has smoked for more than 20 years, there is a health benefit to quitting.										
Overall										
Total	82.6	2.5	81.3	9.1	78.2	6.3	80.9	2.9	91.4	0.4
Men	82.0	3.9	80.7	11.2	78.6	8.7	82.0	4.2	91.1	1.0
Women	83.0	3.0	81.7	14.1	77.8	9.1	79.8	3.5	91.7	0.9
Nonsmokers										
Total	85.5	2.8	79.6	12.3	78.9	7.1	82.1	3.1	93.9	0.7
Men	85.5	4.6	81.8	11.9	80.6	10.8	82.2	4.6	94.0	1.0
Women	85.4	3.3	77.8	19.8	77.7	9.3	82.1	3.9	93.8	1.0
Smokers										
Total	79.0	4.5	88.2	11.0	76.6	13.1	80.3	5.8	88.0	1.7
Men	77.7	6.8	87.8	17.0	76.0	14.6	82.9	8.2	86.9	2.4
Women	80.7	5.9	88.5	14.0	81.9	24.3	77.2	8.0	89.2	2.0

Overcoming these limitations will be imperative in future years because the need for culturally appropriate tobacco control programs will likely grow. Numerous researchers have argued that culturally appropriate health promotion efforts need to be developed for racial/ethnic groups (Rogler et al. 1987; Edwards and MacMillan 1990; Nestle and Cowell 1990; Gonzalez et al. 1991; Robinson et al. 1991; Uba 1992; Vega 1992; Alcalay et al. 1993; Marín 1993). Early outcome data on interventions targeting racial/ethnic groups further indicate the need for such strategies (Chen et al. 1994; Pérez-Stable et al. 1994; Marín and Pérez-Stable 1995). Moreover, in a National Cancer Institute (NCI) analysis of self-guided strategies for smoking cessation, Glynn and colleagues (1990) sup-

ported the need for targeted programs and suggested that the availability of self-guided smoking cessation materials tailored to the needs of a racial/ethnic group "enhances their adoption and may positively affect quit rates" (p. 11). Therefore, culturally appropriate interventions may prove to be more acceptable and easier to implement and also may have increased effectiveness (Fiore et al. 1996). Cultural values, in fact, often support the messages given in effective tobacco control programs. In addition, if the development process includes community leaders and researchers who represent the community, the process itself will enhance the existing tobacco control infrastructure (Robinson et al. 1995).

Primary Prevention Efforts

Most of the programs that seek to prevent tobacco use among racial/ethnic minority groups focus on children and adolescents. These interventions include efforts to restrict minors' access to tobacco products, school-based health education programs, and mass media efforts.

Efforts to Restrict Youth Access to Tobacco

A comprehensive national effort to address the problem of minors' access to tobacco was made in 1992 with the passage of the Synar Amendment to the Alcohol, Drug Abuse, and Mental Health Administration Reorganization Act (Public Law 102-321), which amended the Public Health Service Act. The draft regulations were made final in 1996. These regulations require the 50 states, the District of Columbia, and U.S. jurisdictions to enact and enforce legislation restricting the sale and distribution of tobacco products to minors, as a condition of receiving federal block grant funds for substance abuse and treatment. As a result, all states now designate an agency to enforce their minimum-age laws on purchase of tobacco products. Many local governments have attempted over the years to limit access to tobacco among youths under the age of 18 years by enacting or strictly enforcing legislation that limits minors' ability to purchase tobacco over the counter and through vending machines, whereas others have opted to educate retailers and encourage them to voluntarily comply with legislation that limits the sale of tobacco products to minors (Lynch and Bonnie 1994; USDHHS 1994). Studies show that over-the-counter sales of tobacco to adolescents under the age of 18 years are indeed widespread, although all states prohibit such sales (Altman et al. 1989; Jason et al. 1991; NCI 1991; DiFranza and Brown 1992; Forster et al. 1992). Despite laws in every state that prohibit the sale of tobacco products to persons under 18 years of age, underage buyers in 1996 were able to purchase tobacco products from retail outlets a median of 40 percent of the time, according to reports from states, compared with rates ranging from 60 to 90 percent in previous studies (USDHHS 1998).

In addition to requirements of the Synar Amendment, the recent regulations on tobacco products proposed by the Food and Drug Administration (FDA) and made final on August 23, 1996, sought to reduce

both minors' access to tobacco products and the appeal those products have to minors (see Efforts to Control Tobacco Advertising and Promotion later in this chapter). Three key provisions address minors' access to tobacco: (1) requiring vendors to check a photograph identification as proof of age and prohibiting sales to those under age 18, (2) prohibiting most vending machines and self-service displays of cigarettes except in facilities totally inaccessible to persons under age 18, and (3) prohibiting free samples of cigarettes and sales of individual cigarettes or packs of fewer than 20 cigarettes (so-called kiddie packs). Both the Synar Amendment and the FDA regulations hold promise for reducing tobacco use by all young people, including those who are members of racial/ethnic groups.

In general, adults in the four racial/ethnic groups perceive that minors have fairly easy access to tobacco products. In the 1992-1993 Current Population Survey,¹ a greater proportion of white respondents (55.6 percent) said that it was very easy for minors to purchase tobacco products, compared with American Indians and Alaska Natives (52.6 percent), Hispanics (49.8 percent), African Americans (49.0 percent), and Asian Americans and Pacific Islanders (44.3 percent) (Table 3) (U.S. Bureau of the Census, NCI Tobacco Use Supplement, public use data tapes, 1992-1993). Men and non-smokers were more likely than women and smokers to think that minors had easy access to tobacco products. Data from the 1989 Teenage Attitudes and Practices Survey (TAPS) showed that most youths 12-18 years old who reported cigarette smoking bought their cigarettes primarily at small stores or through cigarette vending machines (Allen et al. 1993). For example, 86.9 percent of white adolescents reported often or sometimes buying their cigarettes from small stores, compared with 80.0 percent of African Americans and 90.0

¹ The Current Population Survey (CPS) is a continuous monthly survey conducted by the U.S. Bureau of the Census and focuses primarily on labor force indicators for the civilian noninstitutionalized U.S. population aged 15 years and older. Questions on smoking and tobacco use (NCI Tobacco Use Supplement) were added to the CPS for the September 1992, January 1993, and May 1993 surveys. About 57,000 eligible households are surveyed each month and yield approximately 110,000 interviews; interviews are conducted with a knowledgeable household respondent who responds for all household members aged 15 years and older. The knowledge, attitude, and belief questions described in this report were asked only of self-respondents.

percent of Hispanics. In contrast, 51.4 percent of white smokers reported often or sometimes buying cigarettes from large stores, compared with 56.6 percent of Hispanics and 39.8 percent of African Americans.

Data from a 1993 follow-up survey (TAPS-II) that were statistically adjusted for participant correlation

and age showed that African Americans were less likely than whites to have ever been asked to show proof of age when buying or trying to buy cigarettes; Hispanics were less likely than non-Hispanics to ever have been asked to show proof of age (CDC 1996). In 1989, 12- to 17-year-old whites who smoked were

Table 3. Adults' beliefs about minors' ease in purchasing cigarettes and other tobacco products,* by race/ethnicity, smoking status, and gender, Current Population Survey, United States, 1992-1993

Characteristic	African Americans		American Indians/ Alaska Natives		Asian Americans/ Pacific Islanders		Hispanics		Whites	
	%	±CI [†]	%	±CI	%	±CI	%	±CI	%	±CI
Total										
Very easy	49.0	0.7	52.6	3.3	44.3	1.6	49.8	0.9	55.6	0.3
Somewhat easy	15.4	0.5	15.9	2.4	16.6	1.2	15.4	0.6	17.6	0.2
Men										
Very easy	52.5	1.2	55.6	4.9	46.0	2.3	51.9	1.3	57.4	0.4
Somewhat easy	16.1	0.9	14.5	3.5	17.6	1.8	15.7	1.0	18.7	0.3
Women										
Very easy	46.8	0.9	50.1	4.5	42.6	2.2	48.1	1.2	54.0	0.4
Somewhat easy	14.9	0.7	17.0	3.4	15.7	1.6	15.2	0.9	16.7	0.3
All nonsmokers										
Very easy	50.9	0.9	51.4	4.2	44.1	1.7	50.4	1.0	57.2	0.3
Somewhat easy	16.1	0.6	16.2	3.1	17.2	1.3	15.5	0.7	17.9	0.2
All smokers										
Very easy	44.2	1.4	54.2	5.3	45.5	4.1	47.1	2.1	50.9	0.6
Somewhat easy	13.4	1.0	15.4	3.8	13.8	2.8	15.1	1.5	17.0	0.4
Nonsmokers										
Men										
Very easy	54.8	1.4	52.2	6.6	46.4	2.6	53.3	1.5	58.9	0.5
Somewhat easy	16.7	1.0	14.3	4.6	18.5	2.0	15.6	1.1	19.0	0.4
Women										
Very easy	48.6	1.1	50.7	5.6	42.3	2.3	48.3	1.3	55.7	0.4
Somewhat easy	15.7	0.8	17.5	4.2	16.1	1.7	15.5	0.9	16.9	0.3
Smokers										
Men										
Very easy	47.8	2.1	59.3	7.4	45.4	4.9	47.7	2.7	53.6	0.8
Somewhat easy	14.8	1.5	14.9	5.3	14.9	3.5	16.3	2.0	18.0	0.6
Women										
Very easy	41.0	1.9	49.1	7.5	45.8	7.5	46.4	3.3	48.4	0.8
Somewhat easy	12.2	1.3	15.9	5.5	11.3	4.7	13.2	2.3	16.0	0.6

*In response to the question, "In your opinion, how easy is it for minors to buy cigarettes and other tobacco products in your community?" Response categories included "very easy," "somewhat easy," "somewhat difficult," "very difficult," and "don't know."

[†]95% confidence interval.

Source: U.S. Bureau of the Census, public use data tapes, 1992-1993.

more likely (58.7 percent) than same-aged African Americans who smoked (43.3 percent) to report that they usually bought their own cigarettes. By 1993, however, 62.1 percent of whites who smoked and 64.1 percent of African Americans who smoked reported that they usually bought their own cigarettes. In 1989, 12- to 17-year-old non-Hispanics who smoked were more likely (59.0 percent) than Hispanics of the same age who smoked (41.3 percent) to report that they usually bought their own cigarettes. By 1993, however, 62.4 percent of non-Hispanics who smoked and 59.1 percent of Hispanics who smoked reported that they usually bought their own cigarettes (CDC 1996). In a study in San Bernardino and Riverside Counties, California, Klonoff and colleagues (1994) found that the purchase of single cigarettes by minors was more frequent in ethnic communities (71.2 percent of minors) than in white neighborhoods (34.4 percent of minors).

Klonoff and colleagues (1997) used a factorial design to study the sale of cigarettes to minors in 72 stores in African American, Hispanic, and white communities. Purchase attempts ($N = 1,296$) were made in 24 stores in each community. There were two participants in each age (ages 10, 14, and 16 years), gender, and race/ethnicity category.

Sales were made most often to 16-year-old African Americans, regardless of gender. A gender effect existed for Hispanics, and more frequent sales occurred to Hispanic girls. Another report based on the same data analyzed purchase attempts by 14- and 16-year-old African American and white participants in African American and white communities (Landrine et al. 1997). Racial- and ethnic-specific sales rates were similar in white communities. In African American communities, however, sales rates were higher for African American youths than for white youths. Of the 41 packs of cigarettes sold to African American youths, only 7 percent were sold by African American vendors. The rest were sold by Asian (67 percent), white (13 percent), and Hispanic (13 percent) vendors, according to participants' reports. Unfortunately, vendor-specific sales rates and comparable sales data by vendor race/ethnicity for the white community were not provided. A limitation of this study is that the apparent age of the minors, an important correlate of sales (DiFranza et al. 1996), was not assessed by independent raters.

A community-based study conducted after passage and enforcement of legislation limiting minors' access to tobacco products showed a reduction in the proportion of merchants who sell cigarettes to minors and the proportion of adolescents who smoke (Jason et al. 1991; Jason et al. 1996). Nevertheless, many merchants—fully aware of legislation prohibiting sales

of tobacco to minors—continue to sell these products to underage customers. For example, in a 1991 study of 156 tobacco retailers in central Massachusetts, 80 percent of the merchants who displayed state-mandated warning signs specifying that it was illegal for minors to purchase tobacco products were still willing to illegally sell cigarettes to youths (DiFranza and Brown 1992). Likewise, a 1994 Massachusetts study reported the ineffectiveness of the tobacco industry-sponsored "It's the Law" voluntary compliance program for stores to prevent underage youths from purchasing tobacco (DiFranza et al. 1996). The results of surveys and sting operations conducted by community action groups affiliated with such organizations as Stop Teenage Addiction to Tobacco (STAT) show that before public awareness campaigns, 32 to 87 percent of U.S. adolescents who tried to buy cigarettes in various communities were able to do so. These figures decreased dramatically (by 10 to 93 percent) when merchants were informed of the law, fined for selling tobacco products to minors, or told that their behavior would be monitored by law enforcement agents (Altman et al. 1989; Feighery et al. 1991; Forster et al. 1992).

Some of the campaigns aimed at increasing merchants' awareness of the law's provisions have concentrated on small, urban convenience stores where many youths purchase their own cigarettes (Davis 1991). As a result of a merchant public awareness campaign in San Diego County, tobacco sales to minors declined in Hispanic and Asian American neighborhoods but not in African American communities (Keay et al. 1993). Additional data are needed to determine the reasons that shopkeepers sell tobacco to minors (Landrine et al. 1994) and also the effectiveness of various approaches among youths of different racial/ethnic minority groups and among owners of convenience stores located in racial/ethnic neighborhoods. Information about the tobacco-purchasing patterns among youths of various racial/ethnic groups also is limited; additional research in this area would be particularly useful in designing programs to curtail youths' access to tobacco products.

Cigarette vending machines are another way minors obtain tobacco products, because the machines are rarely supervised by adults. Tobacco control advocates have recommended banning cigarette vending machines, locking them, or moving them to places where adults could check the ages of purchasers. Results from the 1992 California Tobacco Survey showed that a large proportion of Hispanics (93.8 percent), African Americans (91.1 percent), Asian Americans and Pacific Islanders (87.9 percent), and whites (84.2

percent) were willing to ban cigarette vending machines that are accessible to minors (Pierce et al. 1994a).

Strong support for banning cigarette vending machines accessible to youths also was found in the 1994 Robert Wood Johnson Foundation (RWJF) Youth Access Survey, a national household survey to assess public attitudes about policy alternatives for limiting youths' access to tobacco products. This survey of 2,345 adults, including 486 African Americans, 402 Hispanics, and 1,341 whites, showed that there was willingness to ban cigarette vending machines accessible to youths (Table 4) and strong support for banning all cigarette vending machines (Nancy Kaufman et al., unpublished data).

Although most adults believe that it is relatively easy for youths to obtain cigarettes, the RWJF Youth Access Survey found that African Americans (57.5 percent) were somewhat less likely than Hispanics (67.4 percent) and whites (70.0 percent) to believe that tobacco products were very or somewhat easy for youths to buy in their communities. Even so, African Americans and Hispanics were more supportive than whites of increasing retailing restrictions that would limit youths' access to tobacco, with Hispanics being the most supportive. The retail measure with the broadest public support is the proposal to eliminate self-service tobacco displays, requiring retailers to keep tobacco products behind the counter. Hispanics and African Americans differ from whites in their beliefs about the potential results of raising the age at which tobacco products can be legally purchased. Sixty-five percent of Hispanics and 61.4 percent of African Americans, compared with only 44.3 percent of whites, believe that raising the age of legal purchase to 21 would prevent smoking initiation. Similar results were observed when 19 was proposed as the legal age of purchase.

School-Based Health Education Approaches

In the past decade, numerous programs to prevent tobacco use have been developed for use in schools with a substantial number of white students (Lynch and Bonnie 1994). Rather than consider the specific cultural characteristics of targeted students, most of these programs have been theory-driven or intuitively designed and directed toward students at large. Although youths from various racial/ethnic groups have been included in numerous studies, their responses and behaviors have rarely been separately analyzed or reported in the literature. In a review of school-based smoking-prevention programs, an NCI

panel of experts concluded that, in general, children from the major racial/ethnic groups and those of low-socioeconomic status were the least likely to have been reached by smoking-prevention programs in schools (Glynn 1989). In 1991, the NCI Advisory Panel on Tobacco-Use Reduction Among High-Risk Youth (Glynn et al. 1991) recommended that entire schools be the target of efforts to identify high-risk youth and that a broader approach (such as identifying a school with a large proportion of economically disadvantaged youth) may be more cost-effective and reach the greatest number of high-risk youth without detrimentally labeling individuals the way a more focused approach might. To support the development of effective school-based interventions, the CDC published a set of guidelines for school health programs to prevent tobacco use and addiction (CDC 1994). These guidelines incorporate findings from a number of studies on tobacco use and addiction, call for school-based tobacco-use prevention programs to be provided for students from all racial/ethnic groups, and indicate that such programs should be "sensitive to, and representative of, a student population that is multicultural, multiethnic, and socio-economically diverse" (p. 4).

One significant challenge is the difficulty of implementing a targeted, culturally appropriate intervention in a typical urban classroom that includes students from many cultural and racial/ethnic groups. Another problem with school-based interventions is that teachers in most school districts are overworked and do not have the time, resources, or training to perform these additional activities as part of their daily lessons (Perry et al. 1990). Teachers often have difficulty making tobacco control a high-priority area for instruction when they must also deal with basic educational issues and serious community problems such as crime, illegal drug use, and substandard housing. In addition, high dropout rates in some racial/ethnic minority communities make it impossible for school-based programs to reach many children. For example, a recent analysis of 1990 census data (U.S. General Accounting Office [GAO] 1994) showed that a large proportion of Hispanic dropouts have abandoned formal schooling within the grades (sixth through ninth) when adolescents are vulnerable to cigarette smoking initiation (USDHHS 1994). The GAO report showed that among all Hispanic dropouts, 14 percent had left formal school by the fourth grade and 56 percent had left by the ninth grade.

To overcome these challenges, new school-based tobacco control programs continue to be developed and implemented. ASSIST, the American Stop Smoking Intervention Study, for example, has a youth component, and at some sites such as North Carolina, the

Table 4. Public support for and beliefs about policies regarding tobacco access and marketing, by selected characteristics, Robert Wood Johnson Foundation Youth Access Survey, 1994

Characteristic	African American* (N = 486)		Hispanic (N = 402)		White* (N = 1,341)	
	%	±CI†	%	±CI	%	±CI
Favor banning the sale of cigarettes in vending machines	74.9	3.5	84.5	3.1	72.5	3.1
Favor banning cigarette vending machines that are accessible to youths	93.7	2.0	93.0	2.2	90.7	2.0
Think retailers should keep tobacco products behind the counter to prevent shoplifting by minors	82.6	3.0	88.9	2.7	75.5	3.0
Favor allowing the sale of cigarettes only in certain stores, just as is done with alcohol	46.9	4.0	72.9	3.9	43.1	3.4
Believe that restricting the sale of cigarettes to persons aged 21 years and older will help reduce the number of kids under 21 who begin smoking	61.4	3.9	65.4	4.2	44.3	3.4
Believe that restricting the sale of cigarettes to persons aged 19 years and older will help reduce the number of kids in high school who begin smoking	56.9	3.9	66.5	4.1	47.1	3.5
Favor banning tobacco product advertising on billboards	61.8	3.9	68.9	4.1	57.3	3.4
Favor banning tobacco product advertising in newspapers or magazines	57.4	3.9	62.3	4.3	49.1	3.5
Think tombstone advertising would make smoking less appealing to youths	72.1	3.6	74.9	3.8	72.8	3.1
Favor requiring plain packaging to make cigarettes less attractive to youths	48.0	4.0	61.8	4.3	44.9	3.5
Favor not allowing coupons in cigarette packs to obtain promotional items appealing to youths	76.5	3.4	82.1	3.4	67.8	3.3
Favor not allowing coupon promotions to obtain free cigarettes by mail	79.5	3.2	89.8	2.7	80.4	2.8
Favor not allowing tobacco companies to sponsor sporting or entertainment events in which their brand names are featured	65.1	3.8	71.7	3.9	51.9	3.5
Think that it is very or somewhat easy for youths to buy cigarettes	57.5	3.9	67.4	4.1	70.0	3.2

*Non-Hispanic.

†95% confidence interval.

Source: Nancy Kaufman et al., unpublished data. Ethnic differences in public attitudes about policy alternatives for limiting youth access to tobacco products: results of a national household survey, 1994.

program teaches students to serve as peer counselors who can provide information on smoking prevention and cessation to other high school students. However, little information is available on the counselors' success in racial/ethnic communities.

Some of the largest experimental school-based programs that have included children from racial/ethnic minority groups are briefly described in this section. This listing is not exhaustive because previous reports have reviewed this type of program (Lynch and Bonnie 1994; USDHHS 1994). These interventions represent the variety of school-based approaches used in racial/ethnic neighborhoods.

Project SMART (Self-Management and Resistance Training)

Project SMART is an in-school program designed to encourage junior high school students to resist pressure to use cigarettes and other drugs by teaching them stress-reduction skills, social-resistance skills, and personal decision-making skills. Implemented in 12 sessions, Project SMART provides the students with role-playing opportunities and offers specific techniques for resisting cigarettes, alcohol, marijuana, and other drugs. In an assessment of this program, Graham and colleagues (1990) interviewed seventh graders in 16 California schools between 1982 and 1986. Approximately 6 percent of the participants were Asian American, 20 percent were African American, 31 percent were Hispanic, and 43 percent were white. The program materials, dissemination channels, and evaluation procedures were not tailored specifically for any of these racial/ethnic groups. Differential effects for cigarette smoking on the basis of participants' gender and racial/ethnic minority background were found. Overall, seventh-grade girls were more positively affected by the program than were seventh-grade boys, and Asian Americans were more likely than other racial/ethnic groups to be affected by the intervention. Hispanics and whites were marginally affected by the program, whereas African Americans did not appear to be affected at all.

Life Skills Training Program

The Life Skills Training (LST) Program is a tobacco-use prevention curriculum that teaches adolescents positive life options and social-resistance skills. The program aims to help students enhance their self-esteem, resist tobacco advertising appeals, cope with anxiety, and develop verbal and nonverbal communication skills as well as social and assertiveness skills, including techniques to resist social pressures to smoke

(Botvin et al. 1989a, 1992; Dusenbury and Botvin 1992). Program lessons focus on (1) tobacco information, (2) social skills, (3) personal skills, and (4) self-improvement. Each program includes instruction, behavior modeling and rehearsal, and group feedback. The LST curriculum was initially developed for use with white youths, but the curriculum was later modified for use with Hispanics and African Americans, following consultations with psychologists, educators, reading specialists, and urban adolescents from various racial/ethnic groups. To assess its feasibility, acceptability, and effectiveness in an urban African American population, the LST curriculum was tested in a pilot study involving 608 African American seventh-graders in New Jersey (Botvin et al. 1989a). The study found that the curriculum was acceptable to African American teachers and students and could be implemented with little difficulty in an urban setting. Three months after the intervention, investigators found a 56 percent reduction in the proportion of adolescents who reported that they had smoked in the previous 30 days. In an earlier study, Botvin and colleagues (1989b) found that the use of the LST curriculum was feasible and acceptable among Hispanic seventh-graders attending urban schools in northern New Jersey and in New York City.

More recently, researchers studied the LST curriculum's effectiveness among Hispanic students in the New York City area and found significant changes in knowledge, smoking behavior, and normative expectations concerning peer and adult smoking among students in the schools targeted by the intervention, compared with students in control schools that did not implement the curriculum (Botvin et al. 1992). Consistency in the findings varied, however, because of implementation difficulties across schools. General problems, such as limited resources and stressful conditions in urban schools, may have contributed to these difficulties.

Project SHOUT (Students Helping Others Understand Tobacco)

Project SHOUT was a three-year tobacco-use prevention program that began in 1988 and targeted San Diego students who were in the seventh grade at the beginning of the program (Sallis et al. 1990; Elder et al. 1993b). About 51 percent of the students who participated in the program for all three years were white, and 28 percent were Hispanic. The program consisted of lessons and activities, led by college undergraduate students, on such topics as the consequences of tobacco use, refusal and decision-making skills, and the antecedents and social consequences of tobacco use. Efficacy of the program was measured

with preintervention and postintervention questionnaires administered to students at the end of grades seven, eight, and nine. In addition, the efficacy of the program was tested by using a physiological measurement to detect cigarette smoking and an audiotaped skills assessment of the students' ability to refuse offers of cigarettes (Sallis et al. 1990). Follow-up telephone calls and mailings were made during the last year of the intervention to reinforce the program. The proportion of Project SHOUT students who reported smoking in the previous month increased from 8.3 percent at the end of the seventh grade to 13.2 percent at the end of the ninth grade. In comparison, 9.2 percent of control students reported smoking in the previous month at the end of the seventh grade, and 19.8 percent reported smoking in the previous month at the end of the ninth grade. When researchers used logistic regressions to analyze the prevalence of cigarette smoking during the previous month among ninth graders, comparing control and experimental groups, the results were statistically significant for whites but not for Hispanics (Elder et al. 1993b). When researchers considered cigarette smoking during the previous week, they found statistically significant results for both Hispanic and white respondents. When offered a cigarette in a mock situation, students who received refusal skills training provided more appropriate responses than those who did not receive the training (Sallis et al. 1990).

Southwestern Cardiovascular Curriculum Project and Pathways to Health

In 1990, the University of New Mexico began a series of projects designed to educate Navajo and Pueblo youths about cardiovascular health and the prevention of cancer. The Southwestern Cardiovascular Curriculum Project, founded by the National Heart, Lung, and Blood Institute, provides fifth-grade Navajo and Pueblo youths with information on the health effects of tobacco use and helps them develop skills to resist social pressures (Davis et al. 1995b). An evaluation of the program showed that among students who had tried cigarette smoking at baseline, boys who were randomly assigned to the program reported decreasing their cigarette smoking more than those not participating.

The Pathways to Health program, developed with funding from the NCI, involves fifth and seventh graders in nine Navajo and Pueblo schools in rural northwest New Mexico (Davis et al. 1995a). This 16-lesson curriculum is designed to improve Navajo and Pueblo Indian children's decision-making

abilities regarding health (Cunningham-Sabo and Davis 1993). The curriculum includes skill acquisition, self-discovery, and class discussion, and it blends traditions of Navajo and Pueblo Indians. Overall, the project promotes a diet low in fat and high in fiber, fruits, and vegetables, and it teaches students to avoid both cigarettes and smokeless tobacco (Cunningham-Sabo and Davis 1993). Results of the baseline testing showed that a large proportion of fifth (30.6 percent) and seventh (60.4 percent) graders had tried cigarette smoking (Davis et al. 1995a). Although 64.5 percent of fifth-grade girls and 41.0 percent of fifth-grade boys expressed intentions to never smoke, by the time they became seventh graders, only 37.8 percent of seventh-grade girls and 24.5 percent of seventh-grade boys reported intentions to never smoke. Tribal differences were also noted. Pueblo students reported higher use of cigarettes, and Navajos reported higher use of chewing tobacco and snuff.

Other Primary Prevention and Intervention Efforts

Other primary prevention and intervention programs have been relatively small in scale and have directly targeted members of a given racial/ethnic minority group. For example, Cella and colleagues (1992) recently designed a smoking-prevention curriculum for 309 mostly African American (57 percent) and Hispanic (19 percent) sixth- and seventh-graders from the Chicago area. The program included two assemblies that were attended by all students. The first assembly featured a rap video developed by African American adolescents in Richmond, California, and a talk by an African American oncologist on the health risks of smoking and social pressures to smoke. The second assembly featured a rap contest in which students performed original rap songs they had written to convey messages about smoking prevention. After the first assembly, students who participated in small follow-up groups were found to have more negative attitudes toward smoking, compared with students attending the larger assembly. There were no differences in attitudes towards smoking between students who decided to participate in the rap contest and those who did not. No data were collected on the intervention's possible effects on rates of smoking initiation or continuation.

Another small-scale tobacco-use prevention effort targeted American Indian children from two Washington State reservations (Schinke et al. 1988). American Indian children participating in the project, who were an average of 11.8 years of age, received

training in communication, coping, and cognitive decision-making skills from a bicultural perspective. At a six-month follow-up, children who participated in the program were less likely than children in a control group to report that they had smoked tobacco or used smokeless tobacco within the previous 14 days.

A prevention project now under way in American Indian communities in the northeastern United States involves 260 American Indian adolescents in an after-school cancer education program (Schinke et al. 1996). The intervention merges tribal culture with an educational approach that uses storytellers and role models from the community. The curriculum provides students with information on problem-solving skills, the historical use of tobacco among northeastern Indian tribes, and health and media literacy to show how lifestyle habits are heavily promoted through mass media. Problem-solving skills, the historical use of tobacco among northeastern Indian tribes, and American Indians' heritage are celebrated through such activities as making story bags (bags containing mementos that are reminders of the story) and dance sticks. A preliminary evaluation of the project has shown that American Indian youths who received the tobacco use curricula or the combined tobacco use and dietary curricula had more knowledge and understanding of the health problems associated with tobacco use. In addition, students receiving the tobacco use or the combined curricula were more aware of the role of peers, relatives, and the media in shaping people's dietary and tobacco preferences (Schinke et al. 1996). In another program, involving American Indian children in the northwestern states, Moncher and Schinke (1994) have shown that a culturally appropriate skills-learning curriculum can be more effective when combined with community involvement in the prevention of tobacco use.

Schinke and colleagues (1994) recently developed a program targeting American Indian youths. Based on a legend of the Seneca Nation, the program features an interactive software package entitled *Boy and Woman Bear*, which provides culturally appropriate information on how young people can reduce their risk of cancer via good nutrition and only very limited, nonhabitual use of tobacco. The effectiveness of the software was measured with 368 American Indian youths, aged 10–14 years, in the southeastern United States. As expected, the youths who participated in the program were more knowledgeable about nutrition and tobacco-related facts than were nonparticipants. Further research by these authors (Schinke et al. 1996) has shown the strong effects of multitopic interventions with American Indians.

The Alaska Area Native Health Service of the Public Health Service conducted a pilot study of a school-based intervention targeting 240 Alaska Native children in grades two through six in three Eskimo villages (Bruerd et al. 1994). The curriculum, a modification of previously developed programs, was delivered in 12–15 lessons and involved the children's families in some of the activities. The evaluation of the program showed a decrease in cigarette smoking and in the use of snuff in two of the three villages that participated. The program was most effective when teachers attended training sessions and fully implemented the curriculum. Another program sponsored by the Alaska Area Native Health Service, the Great Alaska Spit-Out, educates Alaska Native schoolchildren and adults about the health risks associated with smokeless tobacco use (Burhansstipanov and Dresser 1993). Schoolchildren in rural Alaska communities prepare essays and public service announcements regarding the health problems associated with tobacco use. All children who submit entries receive certificates. Monetary awards are given for the best essays, and trips to Washington, D.C., are awarded to the first-place winners.

As an adjunct to tobacco control curricula, cigarette smoking bans on school grounds have been imposed in some states (recent federal legislation, Public Law 103–227, Part C, mandates that schools receiving federal monies be tobacco-free). Although some states and school districts have prohibited students from using tobacco on school campuses, they have excluded administrators, teachers, and volunteers from such policies, most likely because some adults are resistant to tobacco-use bans. Data from the 1992 California Tobacco Survey showed that a relatively low proportion of California adults and youths favored banning cigarette smoking on school grounds (Pierce et al. 1994a). Whites (22.3 percent) were the most willing to ban smoking on school grounds, followed by Asian Americans and Pacific Islanders (16.5 percent), African Americans (16.3 percent), and Hispanics (11.1 percent).

Mass Media Efforts to Prevent Tobacco Use

A few programs have developed mass media materials to prevent tobacco use among children in racial/ethnic minority groups. Most of these programs use television commercials and videotapes to present prevention messages in a targeted fashion. *Stop Before You Drop*, a 10-minute videotape developed by African American adolescents in Richmond, California (American Lung Association [ALA] 1990b), presents a

preventive message through stories, rap songs, and dancing; this videotape is available through local affiliates of the ALA. *It's No Joke, Don't Smoke!* is a 30-minute videotape that openly discusses tobacco use among children and young adolescents in racial/ethnic minority groups (California Department of Health Services, Tobacco Control Section 1993). Other mass media prevention approaches include theatrical works presented at school assemblies or during community events and the distribution of newsletters and newspapers in schools and through other community outlets.

No data on the effectiveness of these and similar prevention efforts are available because these activities are relatively new. Although these efforts incorporate the musical preferences of young adolescents (for example, as reflected in programming on MTV [Music Television]) and feature actors from the racial/ethnic groups being targeted, rarely do the messages properly reflect the attitudes, expectations, and normative beliefs of the targeted children. Instead, most of these efforts have allowed untrained scriptwriters (often children from the targeted group) to produce the text. Although this approach benefits from the use of words and expressions that are familiar to the targeted children, it fails to incorporate attitudinal change strategies and the results of studies identifying predictors of tobacco use (see Chapter 4).

Also problematic is the lack of information regarding the best media outlet to use in presenting smoking-prevention campaigns to youths in various racial/ethnic groups, both in terms of frequency of use and in their perceived credibility and motivating power. In a study of 349 Chicago youths aged 5–15

years, Blosser (1988) found differences across racial/ethnic groups in the quantity, frequency, and access to various media. For example, 70.8 percent of African Americans in the sample reported watching television during dinner, compared with 64.6 percent of Puerto Ricans, 58.8 percent of whites, and 58.1 percent of Mexican Americans. Racial/ethnic group differences were also found for access to various media; large proportions of youths reported that they owned a television set (100 percent of whites, 99.0 percent of African Americans, and 97.7 percent of Hispanics), but varying proportions of youths reported that they owned an audiocassette player (80.0 percent of whites, 77.1 percent of Mexican Americans, 62.5 percent of African Americans, and 54.8 percent of Puerto Ricans). In a recent survey of Los Angeles children 8–12 years of age, Raymond J. Gamba (unpublished data) found that children perceived some media channels to be more believable than others when information on tobacco was presented. Overall, respondents perceived talks at school (63 percent), books and pamphlets (54 percent), television programs (54 percent), radio commercials (52 percent), and television commercials (52 percent) to be highly credible in presenting information about tobacco use. Students' perceptions varied by ethnic group. For example, a large proportion of African Americans perceived books and pamphlets to be the most credible channels of information, followed by billboards, posters, newspapers, and television programs and commercials. A large proportion of Asian Americans and Hispanics, however, perceived talks at school to be highly credible, followed by television and radio commercials.

Smoking Cessation Programs

Most structured smoking cessation programs directed at members of racial/ethnic minority groups have emphasized a self-help approach with some supportive adjuncts, such as motivational messages in the mass media or the use of peers or relatives as motivators and supporters (Stotts et al. 1991). This emphasis on self-help may be a direct result of the fact that most smokers quit on their own (Fiore et al. 1990). Some programs have successfully used materials developed

for whites, with little or no adaptation for the racial/ethnic group being targeted. Though there is currently little research on the development of culturally appropriate smoking cessation programs, culture-specific tailoring or the development of culturally appropriate programs may be necessary in order to enhance effectiveness. At a minimum, programs must be communicated in a language understood by the target audience (Fiore et al. 1996).

In this section, six major intervention approaches are described: (1) self-help programs, (2) group programs, (3) community interventions, (4) programs in health care settings, (5) employer-sponsored programs, and (6) nontraditional provider interventions. When available, the results of outcome evaluations of the projects or strategies are mentioned. Because most of these projects are relatively new, there is a paucity of research measuring the effectiveness of the various strategies and programs. These descriptions provide an overview of the different approaches that have been used; the list is not complete and does not necessarily represent the most effective interventions or model programs. Future research efforts should consider the components of culturally appropriate interventions (Marín 1993) and conduct proper process and outcome evaluations to provide a better understanding of the effectiveness of various targeted intervention approaches.

Self-Help Approaches

In the United States, most people who quit smoking do so without the help of formal programs, therapy, or nicotine replacement (Pierce et al. 1989; Fiore et al. 1990; Stotts et al. 1991). Members of racial/ethnic minority groups, however, generally seem to have less success with self-help approaches than whites. For example, recent analyses of the 1986 Adult Use of Tobacco Survey showed that African Americans tended to be less successful at quitting smoking than whites (Fiore et al. 1990).

A number of self-help cessation materials and programs have been developed for members of racial/ethnic groups who want to quit on their own. Some of these materials and programs are adaptations of materials and programs previously developed for whites, usually by federal agencies such as the NCI or voluntary associations such as the ALA. Other programs and materials have been developed specifically for members of these racial/ethnic groups; however, only a few studies report on the success of these programs in helping members of racial/ethnic groups quit smoking.

Smokers from racial/ethnic minority groups tend to favor relying on willpower alone to quit smoking. In a 12-state survey of 1,163 low- to middle-income African American insurance policyholders aged 21–60 years, Orleans and colleagues (1989) found that 89.3 percent of those who were former smokers reported relying primarily on willpower to quit smoking and 21.7 percent reported relying primarily on prayer and meditation. These former smokers also reported seldom

using cessation aids of any type, including smoking cessation groups (0.4 percent) or books and guides (3.2 percent). Likewise, Hispanic smokers surveyed in San Francisco perceived willpower as the most effective technique for quitting smoking (Marín et al. 1990a).

Rompa Con el Vicio: Una Guía Para Dejar de Fumar (Break the Habit: A Guide to Stop Smoking)

The first self-help manual designed specifically for a U.S. racial/ethnic group was developed in 1988 in San Francisco as part of the Programa Latino Para Dejar de Fumar (Hispanic Program to Quit Smoking). The manual was distributed by the NCI under the name *Guía Para Dejar de Fumar* (Sabogal et al. 1988) and was based on a significant number of studies that identified group-specific attitudes, norms, expectancies, and values related to cigarette smoking and smoking cessation among Hispanics and whites (Marín et al. 1990a,b). Initial versions of the manual (hereafter referred to as the *Guía*) were thoroughly pretested to identify optimal formats, designs, photographs, typefaces, and publication format and size. In 1991, a revised version, *El Fumar, Un Juego Peligroso: Guía Para Dejar de Fumar*, was published and distributed in California with funding from Proposition 99 tax revenues earmarked for tobacco control activities (Programa Latino Para Dejar de Fumar de San Francisco 1992). In 1993, the NCI published and distributed nationally the third edition, *Rompa Con el Vicio: Una Guía Para Dejar de Fumar* (Programa Latino Para Dejar de Fumar de San Francisco 1993).

The *Guía* is a 24-page, 8½-by-11-inch, full-color booklet printed on glossy paper and featuring photographs of numerous Hispanic individuals demonstrating various cessation techniques as well as their testimonials about quitting smoking. All text is in broadcast Spanish—that is, conversational Spanish used by television broadcasters and easily understood by all Spanish-speaking Hispanics. The first section of the *Guía* describes the short- and long-term effects of cigarette smoking, including health problems among smokers and their relatives and the negative social effects, such as bad breath and bad-smelling clothes. The second section presents possible methods a smoker can follow to quit, particularly approaches that Hispanic smokers perceive to be effective (Marín et al. 1990a). In addition, this section offers suggestions and verbal scripts for dealing with social pressures to smoke as well as for dealing with stress or depression. The third section presents strategies to follow after a relapse. The final section lists ways relatives and friends can motivate and support smokers who are trying to quit.

The effectiveness of the first edition of the *Guía* was evaluated in a study of 431 Hispanic smokers who volunteered to participate after they picked up the manual at community stores or clinics in San Francisco (Pérez-Stable et al. 1991). More than 21 percent of the participants reported that they had quit smoking 2.5 months after reading the *Guía*; however, this percentage declined to 18.6 percent after more than 8 months and to 13.7 percent after 14 months.

Pathways to Freedom

Pathways to Freedom: Winning the Fight Against Tobacco is a self-help manual targeting African Americans (Robinson et al. 1992). The manual and a companion 12-minute videotape were developed by the Fox Chase Cancer Center in Philadelphia with funding from the NCI and assistance from a number of African American churches and other community groups. The manual was designed to emphasize quitting and community mobilization. In the early stages of the manual's development, focus group participants and community leaders who were interviewed suggested that the manual should include graphics depicting African Americans representing everyday people of all ages, should provide strong visuals illustrating the health consequences of cigarette smoking, and should target smokers and nonsmokers. Persons in the interviews and focus groups also suggested that the manual and videotape include information on targeted advertising and that they identify the tobacco industry as the enemy.

The resulting manual, *Pathways to Freedom*, is a 36-page, 8 1/2-by-11-inch, glossy publication with numerous color photographs and line drawings. The first part of the manual discusses the characteristics of cigarette smoking among African Americans; the tobacco industry's influence on the community through advertising and promotional campaigns; and the effects of stressors, such as unemployment and racism, that promote cigarette smoking behavior. The second part provides instructions on how to quit smoking and help smokers quit, and the third part shows how communities can combat tobacco dependence by working together. The manual addresses the tobacco-related concerns of African American smokers as well as other community members. It covers such topics as cigarette-smoking patterns among African Americans, culturally appropriate strategies to quit smoking, messages that nonsmoking friends and relatives can use to help smokers quit, and the role of prayer and faith in helping people quit and avoid a relapse. The manual was distributed nationally as part of the

Legends campaign carried out in 1993 and 1994 by CDC and the National Medical Association (NMA). As part of an American Cancer Society Pathways to Freedom Community Demonstration Project launched in 1992, 285 African American smokers who received the manual agreed to participate in postintervention evaluations. About 71 percent of respondents read some or all of the guide, and 56 percent of those who did reported trying to quit smoking. Approximately 75 percent of those who tried to quit reported being able to stay off cigarettes for at least 24 hours. Most respondents reported that the manual was easy to read, that the graphics were appropriate, and that it was useful overall (C. Tracy Orleans et al., unpublished data). For more information on the evaluation project, see the discussion later in this chapter under "Community Approaches."

Làm Thế Nào Để Bỏ Hút Thuốc? (How to Quit Smoking)

Làm Thế Nào Để Bỏ Hút Thuốc? is a self-help, smoking cessation manual developed in 1990 to help Vietnamese smokers quit (Vietnamese Community Health Promotion Project 1990). The 30-page, 8 1/2-by-11-inch manual was developed as part of the Vietnamese Community Health Promotion Project based at the University of California, San Francisco. The manual's format is similar to that of the *Guía* and covers topics such as reasons for quitting smoking, the health effects of cigarette smoking, approaches to quitting, dietary concerns while quitting, and suggestions for avoiding and coping with relapse. The manual, available through the California Department of Health Services' Tobacco Control Section, features full-color photographs.

It's Your Life—It's Our Future

It's Your Life—It's Our Future is a 28-page smoking cessation, self-help manual targeting American Indian adults (American Indian Cancer Control Project 1991). The manual was developed by the American Indian Cancer Control Project in Berkeley, California, with NCI funding. The two-color, spiral-bound manual is printed on high-quality paper. The first section of the manual provides motivational information on quitting smoking, including the negative effects of smoking and the positive effects of quitting. The second section presents techniques to help smokers reduce the number of cigarettes smoked per day and offers suggestions on what to do before and after quitting and how to deal with withdrawal symptoms. The last section

of the manual provides suggestions on how to stay free of cigarettes, such as how to deal with pressure to smoke from family and friends, how to control stress, and how not to gain weight. The contents of the manual, the presentation of the materials, and the approach to quitting that is promoted in this manual reflect the values of American Indians and their emphasis on the family and the community. The manual is formatted for easy reading; for example, the sections have bulleted headings, and the text is printed in large type. American Indian artwork and pictures are featured throughout the manual. A 16-minute videotape was produced to further motivate smokers to quit and to remain smoke-free (American Indian Cancer Control Project 1991).

Victory Over Smoking—A Guide to Smoking Cessation for You and Your Family

The Chinese Community Smoke-Free Project of the Chinese Hospital in San Francisco produced a 46-page smoking cessation manual entitled *Victory Over Smoking* (Chinese Community Smoke-Free Project 1992) with funding from California's Proposition 99 tobacco tax initiative. The 8½-by-11-inch manual is printed on glossy paper and has black-and-white photographs of Chinese Americans and line drawings. The manual is written in Chinese, and it describes a number of suggested attitudes and behaviors that are specific to and consonant with Chinese culture. For example, "living long enough to see one's grandchildren grow" is presented as a possible benefit to quitting, and martial arts is suggested as a possible alternative to smoking. The five-part manual was pre-tested with focus groups of San Francisco's Chinese American residents. The first section describes cigarette smoking among Chinese Americans, and the second section describes common health effects of cigarette smoking. The third section presents steps smokers can take as they prepare to quit. The next section describes alternatives to smoking as well as techniques and activities for remaining smoke-free. The final section provides suggestions on how to maintain abstinence, such as through physical exercise, deep breathing exercises, and diet.

Smoking: Facts and Quitting Tips Series

In 1992, the NCI produced two small brochures, *Smoking: Facts and Quitting Tips for Black Americans* (NCI 1992b) and *Smoking: Facts and Quitting Tips for Hispanics* (NCI 1992a). Despite the difference in titles, the brochures are basically identical in content. The

major difference between the brochures is that the one targeting Hispanics includes text in both English and Spanish. No information is yet available on their effectiveness.

Hot Lines

Hot lines for smokers who want to quit provide callers with short-term counseling over the telephone and self-help materials via the mail. Probably the most prominent of these hot lines is the Cancer Information Service (CIS), funded by the NCI, which provides services and information to persons wishing to quit smoking. The CIS provides services in English as well as in Spanish in states with high concentrations of Hispanics. The CIS also provides Spanish-speaking counselors and callers with Spanish-language materials, including copies of the *Guía*.

Some states have implemented their own smoking cessation hot lines. For example, California recently funded a hot line to help smokers quit by providing short-term telephone counseling. Between August 1992 and December 1993, the California hot line received calls from more than 18,000 smokers (Pierce et al. 1994b). Most of these calls came from whites (56.8 percent), followed by Hispanics (20.6 percent), African Americans (16.1 percent), and Asian Americans (2.4 percent). These figures show that the proportion of African American and Hispanic smokers reached by the California hot line was similar to or higher than the proportion of African American smokers (7.0 percent) and Hispanic smokers (18.6 percent) in the state, whereas the proportion of Asian American smokers reached by the hot line was lower than the proportion of Asian American smokers in California (5.0 percent).

Group Approaches

In general, smoking cessation programs that are group-based have had difficulty attracting participants, and attrition rates are often high. The scant data available for racial/ethnic groups indicate that similar difficulties may exist to an even greater extent. For example, Hispanics and Asian Americans rarely participate in smoking cessation groups (Pérez-Stable et al. 1993). The same is true for African Americans (Hymowitz et al. 1996). The possible reasons are varied (Glynn 1989; Stotts et al. 1991; Lichtenstein and Glasgow 1992):

- They may have difficulty accessing primary health care facilities that offer smoking cessation services (because of eligibility criteria or physical distance).