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Guidelines for School Health Programs to Prevent Tobacco Use and Addiction

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Guidelines for School Health Programs to Prevent Tobacco Use and Addiction

Summary

Tobacco use is the leading cause of preventable death in the United States. The majority of daily smokers (82%) began smoking before 18 years of age, and more than 3,000 young persons begin smoking each day. School programs designed to prevent tobacco use could become one of the most effective strategies available to reduce tobacco use in the United States. The following guidelines summarize school-based strategies most likely to be effective in preventing tobacco use among youth. They were developed by CDC in collaboration with experts from 29 national, federal, and voluntary agencies and with other leading authorities in the field of tobacco-use prevention to help school personnel implement effective tobacco-use prevention programs. These guidelines are based on an in-depth review of research, theory, and current practice in the area of school-based tobacco-use prevention. The guidelines recommend that all schools a) develop and enforce a school policy on tobacco use, b) provide instruction about the short- and long-term negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills, c) provide tobacco-use prevention education in kindergarten through 12th grade, d) provide program-specific training for teachers, e) involve parents or families in support of school-based programs to prevent tobacco use, f) support cessation efforts among students and all school staff who use tobacco, and g) assess the tobacco-use prevention program at regular intervals.

INTRODUCTION

Tobacco use is the single most preventable cause of death in the United States (*1*). Illnesses caused by tobacco use increase demands on the U.S. health-care system; lost productivity amounts to billions of dollars annually (*2–3*).

Because four out of every five persons who use tobacco begin before they reach adulthood (*1*), tobacco-prevention activities should focus on school-age children and adolescents. Evidence suggests that school health programs can be an effective means of preventing tobacco use among youth (*4–7*). The guidelines in this report have been developed to help school personnel plan, implement, and assess educational programs and school policies to prevent tobacco use and the unnecessary addiction, disease, and death tobacco use causes. Although these guidelines address school programs for kindergarten through 12th grade, persons working with youth in other settings also may find the guidelines useful.

The guidelines are based on a synthesis of results of research, theory, and current practice in tobacco-use prevention. To develop these guidelines, CDC staff convened meetings of experts from the fields of tobacco-use prevention and education, reviewed published research, and considered the conclusions of the National Cancer Institute Expert Advisory Panel on School-Based Smoking Prevention Programs (*4*)

and the findings of the 1994 Surgeon General's Report, *Preventing Tobacco Use Among Young People* (*8*).

CDC developed these guidelines in consultation with experts representing the following organizations:

American Academy of Pediatrics
American Association of School Administrators
American Cancer Society
American Federation of Teachers
American Heart Association
American Lung Association
American Medical Association
Association of State and Territorial Directors of Public Health Education
Association of State and Territorial Health Officials
Council of Chief State School Officers
Health Resources and Services Administration
Indian Health Service
National Association of School Nurses
National Association of Secondary School Principals
National Association of State Boards of Education
National Cancer Institute
National Center for Nursing Research
National Congress of Parents and Teachers
National Education Association
National Heart, Lung, and Blood Institute
National Institute of Child Health and Human Development
National School Boards Association
National School Health Education Coalition
Office of Disease Prevention and Health Promotion
Office of Minority Health
Substance Abuse and Mental Health Services Administration
The Society of State Directors of Health, Physical Education, and Recreation
U.S. Department of Education
Western Consortium for Public Health

BACKGROUND

School-based programs to prevent tobacco use can make a substantial contribution to the health of the next generation. In this report, the term "tobacco use" refers to the use of any nicotine-containing tobacco product, such as cigarettes, cigars, and smokeless tobacco. These products often contain additional substances (e.g., benzo(a)pyrene, vinyl chloride, polonium 210) that cause cancer in animals and humans (*1*). Recent estimates suggest that cigarette smoking annually causes more than 400,000 premature deaths and 5 million years of potential life lost (*2*). The estimated direct and indirect costs associated with smoking in the United States in 1990 totalled $68 billion (*3*).

In 1964, the Surgeon General's first report on smoking and health documented that cigarette smoking causes chronic bronchitis and lung and laryngeal cancer in men (*9*).

Subsequent reports from the Surgeon General's office have documented that smoking causes coronary heart disease (*10*), atherosclerotic peripheral vascular disease (*1*), cerebrovascular disease (*1*), chronic obstructive pulmonary disease (including emphysema) (*11*), intrauterine growth retardation (*1*), lung and laryngeal cancers in women (*12*), oral cancer (*13*), esophageal cancer (*13*), and cancer of the urinary bladder (*14*). Cigarette smoking also contributes to cancers of the pancreas, kidney, and cervix (*1,14*). Further, low birth weight and approximately 10% of infant mortality have been attributed to tobacco use by pregnant mothers (*1*). The 1994 Surgeon General's report on smoking and health describes numerous adverse health conditions caused by tobacco use among adolescents, including reductions in the rate of lung growth and in the level of maximum lung function, increases in the number and severity of respiratory illnesses, and unfavorable effects on blood lipid levels (which may accelerate development of cardiovascular diseases) (*8*).

Breathing environmental tobacco smoke—including sidestream and exhaled smoke from cigarettes, cigars, and pipes—also causes serious health problems (*15–16*). For example, exposure to environmental tobacco smoke increases the risk for lung cancer and respiratory infections among nonsmokers and may inhibit the development of optimal lung function among children of smokers (*16*). Exposure to environmental tobacco smoke also may increase the risk for heart disease among nonsmokers (*17–18*). The Environmental Protection Agency recently classified environmental tobacco smoke as a Group A carcinogen, a category that includes asbestos, benzene, and arsenic (*19*).

Use of smokeless tobacco, including chewing tobacco and snuff, also can be harmful to health. A report of the Advisory Committee to the Surgeon General indicated that using smokeless tobacco causes oral cancer and leukoplakia (*20*). Early signs of these diseases, particularly periodontal degeneration and soft tissue lesions, are found among young people who use smokeless tobacco (*8*).

Tobacco use is addictive and is responsible for more than one of every five deaths in the United States. However, many children and adolescents do not understand the nature of tobacco addiction and are unaware of, or underestimate, the important health consequences of tobacco use (*1*). On average, more than 3,000 young persons, most of them children and teenagers, begin smoking each day in the United States (*21*). Approximately 82% of adults ages 30–39 years who ever smoked daily tried their first cigarette before 18 years of age (*8*). National surveys indicate that 70% of high school students have tried cigarette smoking and that more than one-fourth (28%) reported having smoked cigarettes during the past 30 days (*22*).

THE NEED FOR SCHOOL HEALTH PROGRAMS TO PREVENT TOBACCO USE AND ADDICTION

The challenge to provide effective tobacco-use prevention programs to all young persons is an ethical imperative. Schools are ideal settings in which to provide such programs to all children and adolescents. School-based tobacco prevention education programs that focus on skills training approaches have proven effective in reducing the onset of smoking, according to numerous independent studies. A summary of findings from these studies demonstrates positive outcomes across programs that vary in format, scope, and delivery method (*8*).

To be most effective, school-based programs must target young persons before they initiate tobacco use or drop out of school. In 1992, 18% of surveyed U.S. high school seniors reported smoking their first cigarette in elementary school, and 30% started in grades seven to nine (*23*). Among persons age 17–18 years surveyed in 1989, substantially more high school dropouts (43%) than high school attendees or graduates (17%) had smoked cigarettes during the week preceding the survey (*24*).

Because considerable numbers of students begin using tobacco at or after age 15, tobacco-prevention education must be continued throughout high school. Among high school seniors surveyed in 1991 who had ever smoked a whole cigarette, 37% initiated smoking at age 15 or older (grades 10–12).

School-based programs offer an opportunity to prevent the initiation of tobacco use and therefore help persons avoid the difficulties of trying to stop after they are addicted to nicotine. The majority of current smokers (83%) wish they had never started smoking, and nearly one-third of all smokers quit for at least a day each year (*25*). Most smokers (93%) who try to quit resume regular smoking within 1 year (*21,26*). Of those persons who successfully quit smoking for 1 year or longer, one-third eventually relapse (*14*).

By experimenting with tobacco, young persons place themselves at risk for nicotine addiction. Persons who start smoking early have more difficulty quitting, are more likely to become heavy smokers, and are more likely to develop a smoking-related disease (*1,27*). Between 1975 and 1985, approximately 75% of persons who had smoked daily during high school were daily smokers 7–9 years later; however, only 5% of those persons had predicted as high school students that they would "definitely" smoke 5 years later (*23*). Smoking is addictive; three out of four teenagers who smoke have made at least one serious, yet unsuccessful, effort to quit (*28*). The 1994 Surgeon General's report on smoking and health concludes that the probability of becoming addicted to nicotine after any exposure is higher than that for other addictive substances (e.g., heroin, cocaine, or alcohol). Further, nicotine addiction in young people follows fundamentally the same process as in adults, resulting in withdrawal symptoms and failed attempts to quit (*8*). Thus, cessation programs are needed to help the young persons who already use tobacco (*4*).

School-based programs to prevent tobacco use should be provided for students of all ethnic/racial groups. In high school, more white (31%) and Hispanic (25%) students than black students (13%) are current smokers (*29*). Although ages and rates of initiation vary by race and ethnicity, tobacco use is a problem for all ethnic/racial groups. Given the diversity of cultures represented in many schools, it is important to tailor prevention programs for particular ethnic/racial subgroups of students. However, programs should be sensitive to, and representative of, a student population that is multicultural, multiethnic, and socio-economically diverse.

Effective school-based programs to prevent tobacco use are equally important for both male and female students. From 1975 to 1987, daily smoking rates among 12th-grade females were as high or higher than males. Since 1988, smoking rates for males and females have been nearly identical (*23*). However, rates of smokeless tobacco use differ by sex: in 1991, 19% of male high school students and only 1% of females reported use during the past 30 days (*22*). Given the growing popularity of smokeless tobacco use, particularly among males (*30*), and given the prevalent misconception

that smokeless tobacco is safe (*23*), school-based programs to prevent tobacco use must pointedly discourage the use of smokeless tobacco.

Despite gains made in the 1970s, progress in reducing smoking prevalence among adolescents slowed dramatically in the 1980s. For example, the percentage of seniors who report that they smoked on one or more days during the past month has remained unchanged since 1980—at approximately 29% (*23*). Further, despite negative publicity and restrictive legislation regarding tobacco use, the proportion of high school seniors who perceive that cigarette users are at great risk for physical or other harm from smoking a pack a day or more has increased only minimally—from 64% in 1980 to 69% in 1992 (*23*). Thus, efforts to prevent the initiation of tobacco use among children and adolescents must be intensified.

School-based programs to prevent tobacco use also can contribute to preventing the use of illicit drugs, such as marijuana and cocaine, especially if such programs are also designed to prevent the use of these substances (*31*). Tobacco is one of the most commonly available and widely used drugs, and its use results in the most widespread drug dependency. Use of other drugs, such as marijuana and cocaine, is often preceded by the use of tobacco or alcohol. Although most young persons who use tobacco do not use illicit drugs, when further drug involvement does occur, it is typically sequential—from use of tobacco or alcohol to use of marijuana, and from marijuana to other illicit drugs or prescription psychoactive drugs (*32*). This sequence may reflect, in part, the widespread availability, acceptability, and use of tobacco and alcohol, as well as common underlying causes of drug use, such as risk-seeking patterns of behavior and deficits in communication and refusal skills. Recent reports on preventing drug abuse suggest that approaches effective in preventing tobacco use can also help prevent the use of alcohol and other drugs (*33–35*).

PURPOSES OF SCHOOL HEALTH PROGRAMS TO PREVENT TOBACCO USE AND ADDICTION

School-based health programs should enable and encourage children and adolescents who have not experimented with tobacco to continue to abstain from any use. For young persons who have experimented with tobacco use, or who are regular tobacco users, school health programs should enable and encourage them to immediately stop all use. For those young persons who are unable to stop using tobacco, school programs should help them seek additional assistance to successfully quit the use of tobacco.

NATIONAL HEALTH OBJECTIVES, NATIONAL EDUCATION GOALS, AND THE YOUTH RISK BEHAVIOR SURVEILLANCE SYSTEM

CDC's *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction* were designed in part to help attain published national health objectives and education goals. In September 1990, 300 national health objectives were released by the Secretary of the Department of Health and Human Services as part of *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* (*36*). The

objectives were designed to guide health promotion and disease prevention policy and programs at the federal, state, and local levels throughout the 1990s. School-based programs to prevent tobacco use can help accomplish the following objectives from *Healthy People 2000* (*37*):

3.4 Reduce cigarette smoking to a prevalence of no more than 15% among people aged 20 and older. (Baseline: 29% in 1987)

3.5 Reduce the initiation of cigarette smoking by children and youth so that no more than 15% have become regular cigarette smokers by age 20. (Baseline: 30% in 1987)

3.7 Increase smoking cessation during pregnancy so that at least 60% of women who are cigarette smokers at the time they become pregnant quit smoking early in pregnancy and maintain abstinence for the remainder of their pregnancy. (Baseline: 39% in 1985)

3.8 Reduce to no more than 20% the proportion of children aged 6 and younger who are regularly exposed to tobacco smoke at home (Baseline: 39% in 1986)

3.9 Reduce smokeless tobacco use by males aged 12 through 24 to a prevalence of no more than 4%. (Baseline: 6.6% for age 12–17 in 1988)

3.10 Establish tobacco-free environments and include tobacco use prevention in the curricula of all elementary, middle, and secondary schools, preferably as part of quality [comprehensive] school health education. (Baseline: 17% of school districts were smoke-free, and 75%–81% of school districts offered antismoking education in 1988)

3.11 Increase to at least 75% the proportion of worksites [such as schools] with a formal smoking policy that prohibits or severely restricts smoking at the workplace. (Baseline: 54% of medium and large companies in 1987)

3.12 Enact in 50 states comprehensive laws on clean indoor air that prohibit or strictly limit smoking in the workplace and enclosed public places [such as schools]. (Baseline: 13 states in 1988)

School-based programs to prevent tobacco use can also help accomplish one of the six National Education Goals (*38*): By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning (Goal 6).

In 1990, CDC established the Youth Risk Behavior Surveillance System to help monitor progress toward attaining national health and education objectives by periodically measuring the prevalence of six categories of health risk behaviors usually established during youth that contribute to the leading causes of death and disease (*39*); tobacco use is one of the six categories. CDC conducts a biennial Youth Risk Behavior Survey (YRBS) of a national probability sample of high school students and also enables interested state and local education agencies to conduct the YRBS with comparable probability samples of high school students in those states and cities (*22*). The specific tobacco-use behaviors monitored by the YRBS include (*40*):

- ever tried cigarette smoking
- age when first smoked a whole cigarette
- ever smoked cigarettes regularly (one cigarette every day for 30 days)

- age when first smoked regularly
- number of days during past month that cigarettes were smoked
- number of cigarettes smoked per day during past month
- number of days during past month that cigarettes were smoked on school property
- ever tried to quit smoking cigarettes during past six months
- any use of chewing tobacco or snuff during past month
- any use of chewing tobacco or snuff during past month on school property.

States and large cities are encouraged to use the YRBS periodically to monitor the comparative prevalence of tobacco use among school students in their jurisdictions, and school officials are encouraged to implement programs specifically designed to reduce these behaviors. These national, state, and local data are being used to monitor progress in reducing tobacco use among youth and to monitor relevant national health objectives and education goals.

RECOMMENDATIONS FOR SCHOOL HEALTH PROGRAMS TO PREVENT TOBACCO USE AND ADDICTION

The seven recommendations below summarize strategies that are effective in preventing tobacco use among youth. To ensure the greatest impact, schools should implement all seven recommendations.

1. Develop and enforce a school policy on tobacco use.
2. Provide instruction about the short- and long-term negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.
3. Provide tobacco-use prevention education in kindergarten through 12th grade; this instruction should be especially intensive in junior high or middle school and should be reinforced in high school.
4. Provide program-specific training for teachers.
5. Involve parents or families in support of school-based programs to prevent tobacco use.
6. Support cessation efforts among students and all school staff who use tobacco.
7. Assess the tobacco-use prevention program at regular intervals.

Discussion of Recommendations

Recommendation 1: Develop and enforce a school policy on tobacco use.

A school policy on tobacco use must be consistent with state and local laws and should include the following elements (*41*):

- An explanation of the rationale for preventing tobacco use (i.e., tobacco is the leading cause of death, disease, and disability)
- Prohibitions against tobacco use by students, all school staff, parents, and visitors on school property, in school vehicles, and at school-sponsored functions away from school property

- Prohibitions against tobacco advertising in school buildings, at school functions, and in school publications
- A requirement that all students receive instruction on avoiding tobacco use
- Provisions for students and all school staff to have access to programs to help them quit using tobacco
- Procedures for communicating the policy to students, all school staff, parents or families, visitors, and the community
- Provisions for enforcing the policy

To ensure broad support for school policies on tobacco use, representatives of relevant groups, such as students, parents, school staff and their unions, and school board members, should participate in developing and implementing the policy. Examples of policies have been published (*41*), and additional samples can be obtained from state and local boards of education.

Clearly articulated school policies, applied fairly and consistently, can help students decide not to use tobacco (*42*). Policies that prohibit tobacco use on school property, require prevention education, and provide access to cessation programs rather than solely instituting punitive measures are most effective in reducing tobacco use among students (*43*).

A tobacco-free school environment can provide health, social, and economic benefits for students, staff, the school, and the district (*41*). These benefits include decreased fires and discipline problems related to student smoking, improved compliance with local and state smoking ordinances, and easier upkeep and maintenance of school facilities and grounds.

Recommendation 2: Provide instruction about the short- and long-term negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.

Some tobacco-use prevention programs have been limited to providing only factual information about the harmful effects of tobacco use. Other programs have attempted to induce fear in young persons about the consequences of use (*44*). However, these strategies alone do not prevent tobacco use, may stimulate curiosity about tobacco use, and may prompt some students to believe that the health hazards of tobacco use are exaggerated (*45–47*).

Successful programs to prevent tobacco use address multiple psychosocial factors related to tobacco use among children and adolescents (*48–51*). These factors include:

- **Immediate and long-term undesirable physiologic, cosmetic, and social consequences of tobacco use.** Programs should help students understand that tobacco use can result in decreased stamina, stained teeth, foul-smelling breath and clothes, exacerbation of asthma, and ostracism by nonsmoking peers.
- **Social norms regarding tobacco use.** Programs should use a variety of educational techniques to decrease the social acceptability of tobacco use, highlight existing antitobacco norms, and help students understand that most adolescents do not smoke.

- **Reasons that adolescents say they smoke.** Programs should help students understand that some adolescents smoke because they believe it will help them be accepted by peers, appear mature, or cope with stress. Programs should help students develop other more positive means to attain such goals.
- **Social influences that promote tobacco use.** Programs should help students develop skills in recognizing and refuting tobacco-promotion messages from the media, adults, and peers.
- **Behavioral skills for resisting social influences that promote tobacco use.** Programs should help students develop refusal skills through direct instruction, modeling, rehearsal, and reinforcement, and should coach them to help others develop these skills.
- **General personal and social skills.** Programs should help students develop necessary assertiveness, communication, goal-setting, and problem-solving skills that may enable them to avoid both tobacco use and other health risk behaviors.

School-based programs should systematically address these psychosocial factors at developmentally appropriate ages. Particular instructional concepts should be provided for students in early elementary school, later elementary school, junior high or middle school, and senior high school (Table 1). Local school districts and schools should review these concepts in accordance with student needs and educational policies to determine in which grades students should receive particular instruction.

Recommendation 3: Provide tobacco-use prevention education in kindergarten through 12th grade. This instruction should be especially intensive in junior high or middle school and should be reinforced in high school.

Education to prevent tobacco use should be provided to students in each grade, from kindergarten through 12th grade (*4*). Because tobacco use often begins in grades six through eight, more intensive instructional programs should be provided for these grade levels (*4–5*). Particularly important is the year of entry into junior high or middle school when new students are exposed to older students who use tobacco at higher rates. Thereafter, annual prevention education should be provided. Without continued reinforcement throughout high school, successes in preventing tobacco use dissipate over time (*52,53*). Studies indicate that increases in the intensity and duration of education to prevent tobacco use result in concomitant increases in effectiveness (*54–56*).

Most evidence demonstrating the effectiveness of school-based prevention of tobacco use is derived from studies of schools in which classroom curricula focused exclusively on tobacco use. Other evidence suggests that tobacco-use prevention also can be effective when appropriately embedded within broader curricula for preventing drug and alcohol use (*57*) or within comprehensive curricula for school health education (*31*). The effectiveness of school-based efforts to prevent tobacco use appears to be enhanced by the addition of targeted communitywide programs that address the role of families, community organizations, tobacco-related policies, antitobacco advertising, and other elements of adolescents' social environment (*8*).

Because tobacco use is one of several interrelated health risk behaviors addressed by schools, CDC recommends that tobacco-use-prevention programs be integrated as

TABLE 1. Instructional concepts (kindergarten through grade twelve)

Early Elementary School	Later Elementary School
KNOWLEDGE: Students will learn that	**KNOWLEDGE: Students will learn that**
• A drug is a chemical that changes how the body works. • All forms of tobacco contain a drug called nicotine. • Tobacco use includes cigarettes and smokeless tobacco. • Tobacco use is harmful to health. • Stopping tobacco use has short-term and long-term benefits. • Many persons who use tobacco have trouble stopping. • Tobacco smoke in the air is dangerous to anyone who breathes it. • Many fires are caused by persons who smoke. • Some advertisements try to persuade persons to use tobacco. • Most young persons and adults do not use tobacco. • persons who choose to use tobacco are not bad persons.	• Stopping tobacco use has short- and long-term benefits* • Environmental tobacco smoke is dangerous to health.* • Most young persons and adults do not use tobacco* • Nicotine, contained in all forms of tobacco, is an addictive drug. • Tobacco use has short-term and long-term physiologic and cosmetic consequences. • Personal feelings, family, peers, and the media influence decisions about tobacco use. • Tobacco advertising is often directed toward young persons • Young persons can resist pressure to use tobacco. • Laws, rules, and policies regulate the sale and use of tobacco.
ATTITUDES: Students will demonstrate	**ATTITUDES: Students will demonstrate**
• A personal commitment not to use tobacco. • Pride about choosing not to use tobacco.	• A personal commitment not to use tobacco* • Pride about choosing not to use tobacco* • Support for others' decisions not to use tobacco • Responsibility for personal health.

* These concepts reinforce content introduced during earlier grades.

TABLE 1. Instructional concepts (kindergarten through grade twelve), continued

SKILLS: Students will be able to	SKILLS: Students will be able to
• Communicate knowledge and personal attitudes about tobacco use. • Encourage other persons not to use tobacco.	• Communicate knowledge and personal attitudes about tobacco use.* • Encourage other persons not to use tobacco.* • Demonstrate skills to resist tobacco use. • State the benefits of a smoke-free environment. • Develop counterarguments to tobacco advertisements and other promotional materials • Support persons who are trying to stop using tobacco.
Middle School/Junior High School	**Senior High School**
KNOWLEDGE: Students will learn that	**KNOWLEDGE: Students will learn that**
• Most young persons and adults do not smoke.* • Laws, rules, and policies regulate the sale and use of tobacco.* • Tobacco manufacturers use various strategies to direct advertisements toward young persons, such as "image" advertising.* • Tobacco use has short- and long-term physiologic, cosmetic, social, and economic consequences.* • Cigarette smoking and smokeless tobacco use have direct health consequences.* • Maintaining a tobacco-free environment has health benefits. • Tobacco use is an unhealthy way to manage stress or weight. • Community organizations have information about tobacco use and can help persons stop using tobacco. • Smoking cessation programs can be successful. • Tobacco contains other harmful substances in addition to nicotine.	• Most young persons and adults do not smoke.* • Tobacco use has short- and long-term physiologic, cosmetic, social, and economic consequences.* • Cigarette smoking and smokeless tobacco use have direct health consequences.* • Community organizations have information about tobacco use and can help persons stop using tobacco.* • Smoking cessation programs can be successful.* • Tobacco use is an unhealthy way to manage stress or weight.* • Tobacco use during pregnancy has harmful effects on the fetus. • Schools and community organizations can promote a smoke-free environment. • Many persons find it hard to stop using tobacco, despite knowledge about the health hazards of tobacco use.

* These concepts reinforce content introduced during earlier grades.

TABLE 1. Instructional concepts (kindergarten through grade twelve), continued

ATTITUDES: Students will demonstrate	**ATTITUDES: Students will demonstrate**
• A personal commitment not to use tobacco.* • Pride about choosing not to use tobacco.* • Responsibility for personal health.* • Support for others' decisions not to use tobacco.* • Confidence in personal ability to resist tobacco use.	• A personal commitment not to use tobacco.* • Pride about choosing not to use tobacco.* • Responsibility for personal health.* • Support for others' decisions not to use tobacco.* • Confidence in personal ability to resist tobacco use.* • Willingness to use school and community resources for information about, and help with, resisting or quitting tobacco use.
SKILLS: Students will be able to	**SKILLS: Students will be able to**
• Encourage other persons not to use tobacco.* • Support persons who are trying to stop using tobacco.* • Communicate knowledge and personal attitudes about tobacco use.* • Demonstrate skills to resist tobacco use.* • Identify and counter strategies used in tobacco advertisements and other promotional materials.* • Develop methods for coping with tobacco use by parents and with other difficult personal situations, such as peer pressure to use tobacco. • Request a smoke-free environment.	• Encourage other persons not to use tobacco.* • Support persons who are trying to stop using tobacco.* • Communicate knowledge and personal attitudes about tobacco use.* • Demonstrate skills to resist tobacco use.* • Identify and counter strategies used in tobacco advertisements and other promotional materials.* • Develop methods for coping with tobacco use by parents and with other difficult personal situations, such as peer pressure to use tobacco.* • Use school and community resources for information about and help with, resisting or quitting tobacco use. • Initiate school and community action to support a smoke-free environment.

* These concepts reinforce content introduced during earlier grades.

part of comprehensive school health education within the broader school health program (*58*).

Recommendation 4: Provide program-specific training for teachers.

Adequate curriculum implementation and overall program effectiveness are enhanced when teachers are trained to deliver the program as planned (*59,60*). Teachers should be trained to recognize the importance of carefully and completely implementing the selected program. Teachers also should become familiar with the underlying theory and conceptual framework of the program as well as with the content of these guidelines. The training should include a review of the program content and a modeling of program activities by skilled trainers. Teachers should be given opportunity to practice implementing program activities. Studies indicate that in-person training and review of curriculum-specific activities contribute to greater compliance with prescribed program components (*4,5,61,62*).

Some programs may elect to include peer leaders as part of the instructional strategy. By modeling social skills (*63*) and leading role rehearsals (*64*), peer leaders can help counteract social pressures on youth to use tobacco. These students must receive training to ensure accurate presentation of skills and information. Although peer-leader programs can offer an important adjunct to teacher-led instruction, such programs require additional time and effort to initiate and maintain.

Recommendation 5: Involve parents or families in support of school-based programs to prevent tobacco use.

Parents or families can play an important role in providing social and environmental support for nonsmoking. Schools can capitalize on this influence by involving parents or families in program planning, in soliciting community support for programs, and in reinforcing educational messages at home. Homework assignments involving parents or families increase the likelihood that smoking is discussed at home and motivate adult smokers to consider cessation (*65*).

Recommendation 6: Support cessation efforts among students and all school staff who use tobacco.

Potential practices to help children and adolescents quit using tobacco include self-help, peer support, and community cessation programs. In practice, however, these alternatives are rarely available within a school system or community. Although the options are often limited, schools must support student efforts to quit using tobacco, especially when tobacco use is disallowed by school policy.

Effective cessation programs for adolescents focus on immediate consequences of tobacco use, have specific attainable goals, and use contracts that include rewards. These programs provide social support and teach avoidance, stress management, and refusal skills (*66-69*). Further, students need opportunities to practice skills and strategies that will help them remain nonusers (*66,67,70*).

Cessation programs with these characteristics may already be available in the community through the local health department or voluntary health agency (e.g., American Cancer Society, American Heart Association, American Lung Association). Schools should identify available resources in the community and provide referral and follow-up services to students. If cessation programs for youth are not available, such

programs might be jointly sponsored by the school and the local health department, voluntary health agency, other community health providers, or interested organizations (e.g., churches).

More is known about successful cessation strategies for adults. School staff members are more likely than students to find existing cessation options in the community. Most adults who quit tobacco use do so without formal assistance. Nevertheless, cessation programs that include a combination of behavioral approaches (e.g., group support, individual counseling, skills training, family interventions, and interventions that can be supplemented with pharmacologic treatments) have demonstrated effectiveness (*71*). For all school staff, health promotion activities and employee assistance programs that include cessation programs might help reduce burnout, lower staff absenteeism, decrease health insurance premiums, and increase commitment to overall school health goals (*41*).

Recommendation 7: Assess the tobacco-use prevention program at regular intervals.

Local school boards and administrators can use the following evaluation questions to assess whether their programs are consistent with CDC's *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction.* Personnel in federal, state, and local education and health agencies also can use these questions to a) assess whether schools in their jurisdicition are providing effective education to prevent tobacco use and b) identify schools that would benefit from additional training, resources, or technical assistance. The following questions can serve as a guide for assessing program effectiveness:

1. Do schools have a comprehensive policy on tobacco use, and is it implemented and enforced as written?
2. Does the tobacco education program foster the necessary knowledge, attitudes, and skills to prevent tobacco use?
3. Is education to prevent tobacco use provided, as planned, in kindergarten through 12th grade, with special emphasis during junior high or middle school?
4. Is in-service training provided, as planned, for educators responsible for implementing tobacco-use prevention?
5. Are parents or families, teachers, students, school health personnel, school administrators, and appropriate community representatives involved in planning, implementing, and assessing programs and policies to prevent tobacco use?
6. Does the tobacco-use prevention program encourage and support cessation efforts by students and all school staff who use tobacco?

CONCLUSION

In 1964, the first Surgeon General's report on smoking and health warned that tobacco use causes serious health problems. Thirty years later, in 1994, the Surgeon General reports that tobacco use still presents a key threat to the well-being of children. School health programs to prevent tobacco use could become one of the most effective national strategies to reduce the burden of physical, emotional, and monetary expense incurred by tobacco use.

To achieve maximum effectiveness, school health programs to prevent tobacco use must be carefully planned and systematically implemented. Research and experience acquired since the first Surgeon General's report on smoking and health have helped in understanding how to produce school policies on tobacco use and how to plan school-based programs to prevent tobacco use so that they are most effective. Carefully planned school programs can be effective in reducing tobacco use among students if school and community leaders make the commitment to implement and sustain such programs.

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