Chronic Disease Notes & Reports

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Special Focus: Reducing Tobacco Use

The National Tobacco Control Program

CDC data show that if current trends continue, 5 million children alive today will die prematurely during adulthood of tobacco-related illnesses. According to Terry Pechacek, PhD, Associate Director for Science in CDC's Office on Smoking and Health (OSH), "Research has shown that in states with higher levels of investment in tobacco control programs, there is a greater impact on reducing tobacco use—and results are seen more quickly—than in states with lower funding levels." In fiscal year 2001, however, only seven states met or exceeded CDC's minimum recommendations for funding such programs.

"The question is, how many of the 5 million children are we going to save?" asked Dr. Pechacek. CDC's goal, he said, is to build a national tobacco control infrastructure. To do this, CDC will use the National Tobacco Control Program (NTCP), launched in May 1999, to bring various earlier federal initiative activities into one national program. In fiscal year 2000, the NTCP distributed $59 million for comprehensive tobacco control efforts in all 50 states, the District of Columbia, and seven U.S. territories. However, CDC and state investments are unlikely to eliminate the burden of tobacco use in the United States. Strategies must include social, economic, and regulatory measures, and funding from other federal sources.

CDC data show that the burden of tobacco use in the states and territories varies widely; for example, state-specific smoking prevalence among adults varied more than twofold in 1999, ranging from a low of 13.9% in Utah to a high of 31.5% in Nevada. Current smoking prevalence among high school students ranged from 11.9% in Utah to 43.6% in South Dakota, more than a threefold difference. These differences mean that each state must develop a unique and targeted response to the problem of tobacco use within the broad famework of proven strategies.

Statewide programs have emerged as the new laboratory for developing and evaluating comprehensive plans to reduce tobacco use. Information from states that have already implemented comprehensive tobacco control programs shows that such programs are effective in preventing and reducing tobacco use. Findings from these states (California and Massachusetts, in particular) led to the development of

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Commentary

Public Health Demands Continuing Progress in Tobacco Control

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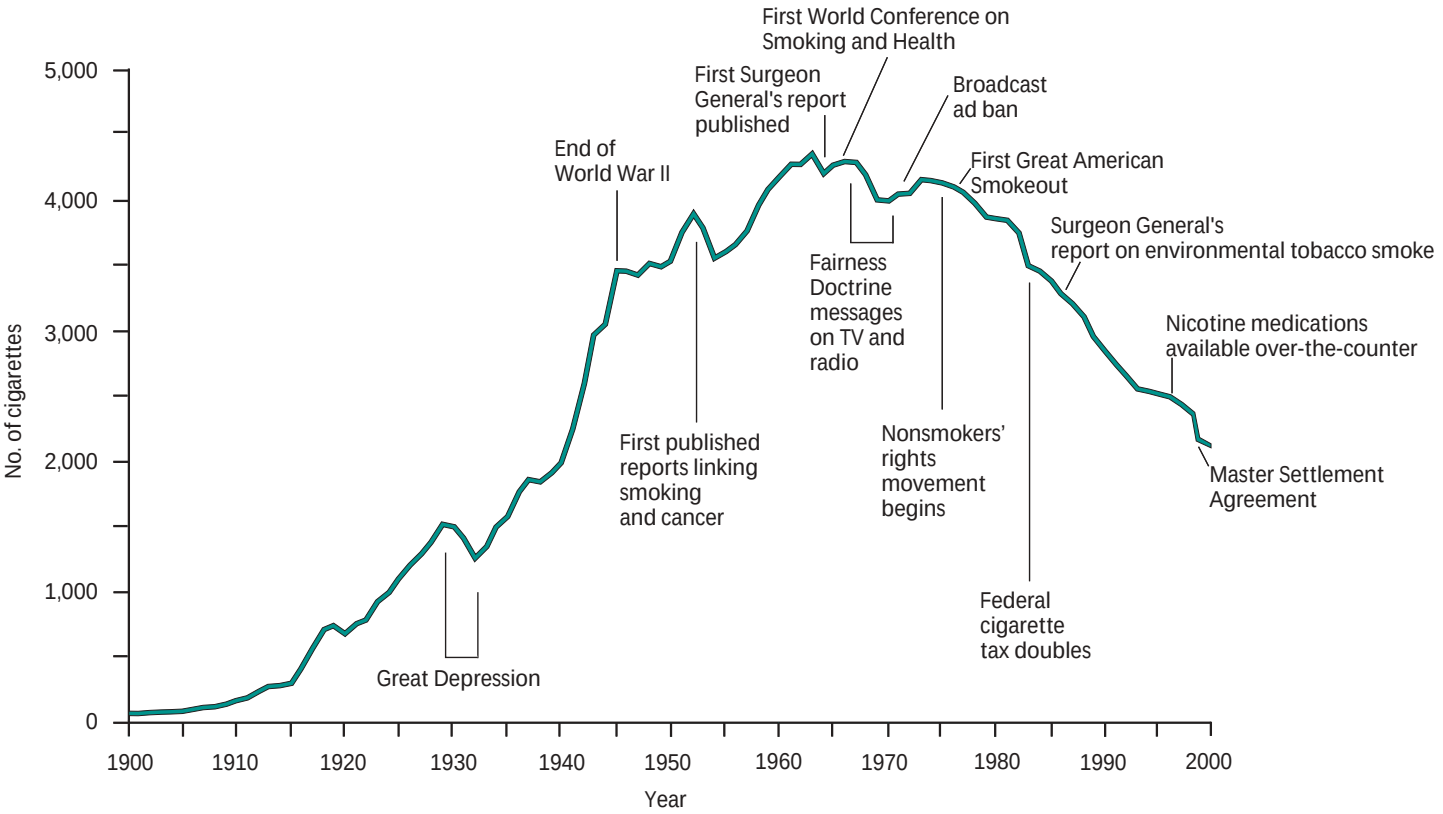
These are unprecedented times in the field of tobacco control. The landscape began changing dramatically during 1997–1998 when four states—Mississippi, Florida, Texas, and Minnesota—successfully sued tobacco companies to recover the Medicaid costs of treating smokers. Then came the 1998 Master Settlement Agreement, which settled a similar lawsuit brought by the attorneys general of the remaining 46 states. These events marked a turning point in the battle against tobacco-related diseases. The total financial settlements with the states, about $246 billion, provide a historic opportunity to strengthen state tobacco control programs. The settlement comes at a time when we know that a comprehensive approach to tobacco control is effective. At the same time, the challenges remain formidable. Nearly one-quarter of Americans still smoke, and the percentage of young people who smoke increased dramatically in the early to mid-1990s.

Significant efforts to curb tobacco use continue on the domestic front. Among the major domestic initiatives that CDC's Office on Smoking and Health (OSH) is planning to strengthen is one to reduce exposure to

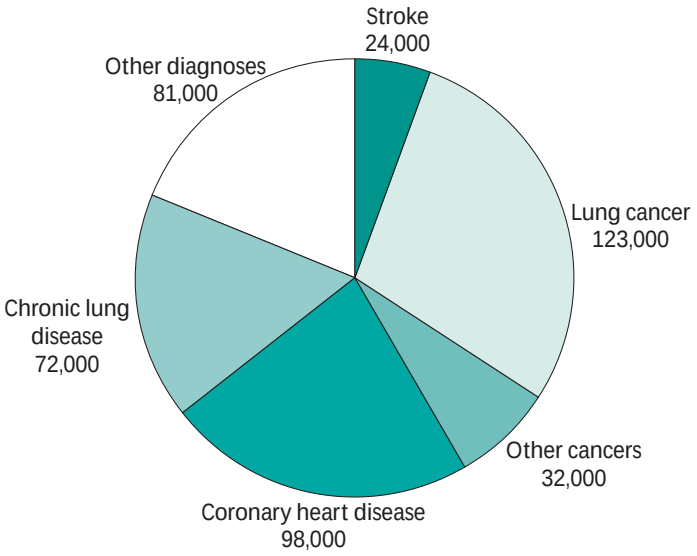
Adult per Capita Cigarette Yearly Consumption and Major Smoking and Health Events, United States, 1900–1999



Sources: Centers for Disease Control and Prevention. Tobacco use—United States, 1900–1999. Morbidity and Mortality Weekly Report 1999;48(43):986; Department of Agriculture, Economic Research Service, Marketing and Trade Economics Division, Specialty Crops Branch, unpublished data; Department of Agriculture. Agricultural Outlook. Washington (DC): Department of Agriculture, Economic Research Service, 2001. USDA Publication No. ERS-AO-278.

environmental tobacco smoke (ETS). When the history of tobacco control is written, the movement to reduce exposure to ETS will be a major chapter. Each year, exposure to ETS causes as many as 3,000 lung cancer deaths and 35,000 or more heart disease deaths among nonsmokers and up to 300,000 respiratory tract infections among children. In recent years this movement appears to have lost some momentum. We need still to protect children from this health hazard as effectively as adults, as shown by recently released data from NHANES, the National Health and Nutrition Examination Survey. Although the *Healthy People 2010* objectives regarding adult exposure to ETS aleady have been exceeded, the objective regarding children has not been achieved, and more than half of young people continue to be exposed. The July 2001 issue of *Pediatrics* reports on interventions to help parents who smoke; similar programs will be needed to protect the health of children.

430,000 U.S. Deaths Attributable Each Year to Cigarette Smoking*



*Average annual number of deaths, 1990–1994

Because tobacco control is a global health issue, our partners are international as well as domestic. These include the Tobacco Free Initiative of the World Health Organization (WHO), the World Bank and other United Nations agencies, and the Departments of State, Commerce, Trade, and Agriculture. On May 24, 1999, The World Health Assembly (WHA), the governing body of WHO, paved the way for multilateral negotiations to begin on a set of rules and regulations that will govern the global rise and spread of tobacco and tobacco products in the next century. The 191-member WHA unanimously backed a resolution calling for work to begin on the Framework Convention on Tobacco Control—a new legal instrument that could address issues as diverse as tobacco advertising and promotion, agricultural diversification, smuggling, taxes, and subsidies. WHO and CDC have also partnered to develop and conduct the Global Youth Tobacco Survey, a school-based survey that measures tobacco-related attitudes, knowledge, and behaviors among teens aged 13–15 in a rapidly expanding number of countries around the world. (See related article, page 24.)

To ensure that our goals, priorities, and strategies are most responsive to the current challenges and opportunities in tobacco control, OSH has been engaged in a rigorous strategic planning process and will soon issue a draft plan for review by our partners. In the meantime, major initiatives continue on topics such as preventing tobacco use among young people (in schools and through sports and entertainment), increasing cessation, addressing health disparities, building support for clean indoor air policies, and countering the effects of tobacco use on oral health. These and other tobacco-related health issues are the subject of this issue of *Chronic Disease Notes and Reports*. They reflect OSH's continuing commitment to develop the science base of tobacco control; provide technical assistance and resources to states, voluntary organizations, and other partners; communicate effectively through schools, work sites, and the mass media; and protect all population groups from the health losses associated with tobacco-related diseases.

The National Tobacco Control Program

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Significant changes have occurred in states that have committed adequate resources to tobacco control, showing that it is possible to meet national goals for reducing tobacco use.

CDC's *Best Practices for Comprehensive Tobacco Control Programs* (see sidebar, page 7), which describes nine essential elements that should be included in a comprehensive program:

1. Community programs to reduce tobacco use.
2. Chronic disease programs to reduce the burden of tobacco-related illness.
3. School programs.
4. Enforcement of tobacco control policies.
5. Statewide programs.
6. Countermarketing.
7. Cessation programs.
8. Surveillance and evaluation.
9. Administration and management.

The *Best Practices* document also includes recommendations for the appropriate level of funding for each component based on specific characteristics of each state. According to the U.S. Surgeon General, David Satcher, MD, PhD, "There are known strategies for reducing the burden of smoking-related diseases, but making the investment in these proven strategies remains a challenge."

State Efforts to Control Tobacco Use

Significant changes have occurred in states that have committed adequate resources to tobacco control, showing that it is possible to meet national goals for reducing tobacco use. Some states have passed legislation to raise cigarette taxes and fund comprehensive tobacco control efforts with the proceeds. In other cases, large monetary settlement payments from state Medicaid lawsuits against the tobacco industry are being used to fund major new statewide tobacco control programs.

In 1988, **California** was the first state to pass a citizen initiative to raise tobacco taxes and dedicate a portion of the revenue to tobacco prevention and education programs. (Massachusetts did the same in 1992, Arizona in 1994, and Oregon in 1996.) California is now starting to see the benefits of its sustained efforts. Between 1988 and 1997, the incidence rate of lung cancer among women declined by 4.8% in California while it increased by 13.2% in other U.S. regions. Another recent study concluded that the California program was associated with 33,300 fewer deaths from heart disease between 1989 and 1997 among women and men combined than would have been predicted if trends like those observed in the rest of the country had continued.

In **Massachusetts,** combining a cigarette tax hike with a statewide media campaign markedly reduced cigarette consumption in the state. Between 1992 and 1996, per capita cigarette consumption fell by 20% in Massachusetts, more than three times the rate of decline (6%) in the 48 states not having such a program.

Arizona's comprehensive program, started in 1996, placed an especially heavy emphasis on community-based efforts. As a result, adult smoking prevalence in Arizona declined by 21% between 1996 and 1999, and significant reductions were observed in both males and females, in young adults, and in the state's Hispanic populations.

Oregon increased cigarette excise taxes by 30 cents per pack and funded a

comprehensive tobacco prevention and education program that reduced overall cigarette consumption by 11.3% between 1996 and 1998. Among adults, smoking prevalence declined 6.4% during this same time frame, representing 35,000 fewer smokers in the state. Despite a population increase of 2.7%, 25 million fewer cigarette packs were sold in Oregon in 1998 than were sold in 1996.

A study released in 1999 by CDC and **Florida's** Department of Health described how state efforts to reduce teen smoking resulted in a significant decline in smoking rates among middle and high school students in Florida between 1998 and 1999. Past-month smoking rates declined among middle schoolers from 18.5% to 15.0%, while rates among high school students dropped from 27.4% to 25.2%. This represents the largest annual reported decline in teen smoking rates in the United States since 1980. Current smokeless tobacco use also dropped significantly among middle school students, from 6.9% in 1998 to 4.9% in 1999.

Other Tobacco Control Activities Are Still Needed

"We are encouraged by the fact that states are investing more for tobacco control than at any time in our history," CDC Director Jeffrey Koplan, MD, MPH, said. In fiscal year 2001, 45 states made a total investment in tobacco-use prevention and control programs of more than $883 million, or about $3.38 per person. "However," Dr. Koplan pointed out, "these investments are far exceeded by the $8.24 billion that tobacco companies spend each year to advertise and promote their products. They are outspending us by nearly 10 to 1."

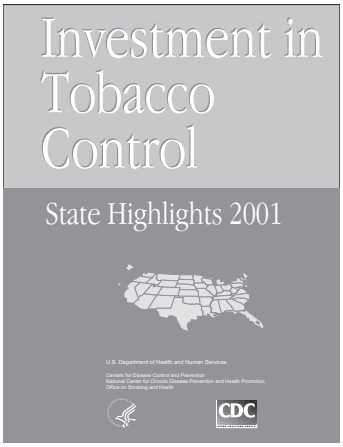
State investments alone are not enough to reduce the burden of tobacco use in the United States. "*Healthy People 2010,* the national action plan for

CDC has been a long-time leader in the national effort to reduce tobacco use. Along with its many partners from a broad spectrum of professional and voluntary organizations, academic institutions, and local, state, and other federal agencies, CDC's **National Tobacco Control Program** provides scientific expertise and funding to support a comprehensive, broad-based approach with four main goals:

- Preventing young people from starting to smoke.
- Eliminating exposure to environmental tobacco smoke.
- Promoting quitting.
- Identifying and eliminating disparities in tobacco use among different population groups.

These four goals focus on groups at high risk of using tobacco—such as young people, racial and ethnic minority groups, blue-collar workers, people with low incomes, and women. Prevention activities are carried out through the following program components:

- **Community interventions** are designed to influence societal organizations, systems, and networks and enable them to help people make behavior changes consistent with tobacco-free norms.
- **Countermarketing** programs attempt to reduce pro-tobacco influences and promote pro-health messages through the use of media advocacy, media relations, counteradvertising, and efforts to reduce tobacco industry sponsorships and promotions and expose industry tactics.
- **Policy and regulation** efforts include analyzing current policy and educating decision makers and the public about the importance and benefit of public health policies. Such policies may address clean indoor air, excise taxes, product regulation, insurance coverage for treatment and cessation assistance, and ingredient disclosure.
- **Surveillance and evaluation** activities continuously monitor tobacco-use measures over time to guide program and policy direction and interventions. They also include point-in-time assessments to measure the effectiveness of programmatic, policy, and media efforts.



State investments in tobacco control are far exceeded by the $8.24 billion that tobacco companies spend each year to advertise and promote their products.

improving the health of all Americans, sets forth 21 ambitious tobacco-related objectives, including cutting in half the rates of tobacco use among young people and adults," wrote Lawrence W. Green, DrPH, former Acting Director, OSH, in a foreword to a CDC report entitled *Investment in Tobacco Control: State Highlights 2001*. "Achieving these objectives will require a significant national commitment to implement a variety of strategies, including social, economic, and regulatory approaches—some of which can only be implemented by the federal government or by the private sector."

Dr. Green cited CDC's efforts as an example of the essential role of federal support, and he praised the American Legacy Foundation's national media campaign, upon which states can build and tailor messages specific to their populations, as an example of excellent private sector involvement. Other private partners in the national effort to reduce tobacco use are the American Cancer Society, the American Lung Association, the American Medical Association, the National Center for Tobacco-Free Kids, and the Robert Wood Johnson Foundation.

Tools to Inform State Programs

CDC's State Tobacco Activities Tracking and Evaluation (STATE) System is an Internet tool for public use that provides information to planners and policymakers and supports their efforts to develop and improve comprehensive tobacco control programs in their states. It is the first-ever electronic data warehouse of state-based tobacco information and was designed by OSH to provide consistent interpretation of the data and facilitate research. It combines many different data sources and gives users access to informative and comprehensive summaries of tobacco use in all 50 states and the District of Columbia. At the STATE Web site (www2.cdc.gov/nccdphp/osh/state), users can find up-to-date information and historical data on the prevalence of tobacco use, tobacco control laws, the health impact and costs associated with tobacco use, and tobacco agriculture and manufacturing.

The Youth Tobacco Survey (YTS), conducted by CDC in collaboration with most states, provides information about tobacco use among the nation's middle and high school students. First implemented in 1998 in Florida, Mississippi, and Texas, the YTS has grown to include data from 43 states and the District of Columbia. It has become a critical component of state surveillance and evaluation systems, and findings from the surveys are used to help guide the design, implementation, and evaluation of the youth components of comprehensive state tobacco control and prevention programs.

CDC's OSH also provided technical advice to the CDC Foundation as it conducted the first National Youth Tobacco Survey in 1999. This survey, funded by The American Legacy Foundation, provided the first- ever national data on tobacco use among middle school students. It was repeated during the spring of 2000.

The Need to Act Now

Tobacco use, particularly cigarette smoking, remains the number one cause of preventable disease and death in the United States. Clearly, as shown

Five Key Documents on Tobacco Control

The CDC Community Guide staff is convening five state workshops to bring together public health decision makers, practitioners, and tobacco control advocates to help them better understand the importance of these key documents and how they complement each other and to assist in program and policy development. For more information, contact Bradford Myers at 1/770/488-8230.

Reducing Tobacco Use: A Report of the Surgeon General. This report on smoking and health is the first to offer a composite review of the various methods used to reduce and prevent tobacco use. The topic is a new one in this series of reports, although previous reports have looked at aspects of such strategies. This report evaluates each of five major approaches to reducing tobacco use: educational, clinical, regulatory, economic, and comprehensive. Further, the report attempts to place the approaches in the larger context of tobacco control, providing a vision for the future of tobacco-use prevention and control based on these available tools. The report is clear in its overriding conclusion: *Although our knowledge about tobacco control remains imperfect, we know more than enough to act now*. Available on the Internet at http://www.cdc.gov/tobacco/sgr_tobacco_use.htm

The Guide to Community Preventive Services: Tobacco Use Prevention and Control. This special supplement of the *American Journal of Preventive Medicine* was produced by the Task Force on Community Preventive Services with support from CDC's Office on Smoking and Health, the National Cancer Institute's Division of Cancer Control and Population Sciences, and the Division of Prevention Research and Analytic Methods in CDC's Epidemiology Program Office. This publication offers evidence-based recommendations on the most effective and cost-effective strategies within comprehensive tobacco control programs. The evidence on which the recommendations are based is clearly laid out, as are the methods used to establish that evidence base, allowing users to determine for themselves how best to apply the recommendations locally. In addition, another report summarizes guidelines on various aspects of tobacco-use prevention and control from different sources within the federal government and clearly lays out how they complement each other and can be used together to create a rational and comprehensive evidence-based tobacco policy. Available at http://www.thecommunityguide.org/home_f.html

Treating Tobacco Use and Dependence: A Clinical Practice Guideline. Studies have shown that 70% of current smokers would like to quit, and that among smokers who try to quit, those who have the support of their physician or other health care provider are the most successful. This Public Health Service report, aimed at practicing clinicians, contains evidence-based information about first- and second-line pharmacologic therapies and highlights new evidence about how telephone counseling can help patients quit. The guideline was developed by a consortium that included CDC, the Agency for Health Care Research and Quality, the Robert Wood Johnson Foundation, the University of Wisconsin Medical School's Center for Tobacco Research and Intervention, the National Cancer Institute, the National Institute on Drug Abuse, and the National Heart, Lung, and Blood Institute. In addition, more than 100 other organizations supported this effort. This guideline builds on a smoking cessation guideline first issued by the government in 1996 and concludes that tobacco dependence treatments are both clinically effective and cost-effective relative to other medical and disease prevention interventions. It urges health care insurers and purchasers to include, as a covered benefit, the counseling and pharmacotherapeutic treatments identified in the report as effective and to pay clinicians for providing tobacco dependence treatment, just as they pay for treatment of other chronic conditions. Available at http://www.cdc.gov/tobacco/quit/guidline.htm

Best Practices for Comprehensive Tobacco Control Programs is an evidence-based guide to help states plan and establish effective programs to prevent and reduce tobacco use. The book identifies and describes the key elements for effective state tobacco control programs, including programs designed for communities, schools, and the entire state. *Best Practices* also addresses the significance of cessation programs, countermarketing, enforcement, surveillance and evaluation, and chronic disease programs for reducing the burden of tobacco-related diseases. Tobacco control program funding models for all 50 states and the District of Columbia are included. Available at http://www.cdc.gov/tobacco/bestprac.htm

Investment in Tobacco Control: State Highlights 2001 analyzes current investments in tobacco control, places these investments in the context of tobacco-use prevalence rates and health and economic consequences of tobacco use specific to each state, and compares current investments with the specific funding ranges contained in *Best Practices*. The report is the third *State Highlights* report released by CDC and for the first time provides a compilation of state investments in tobacco control and the funding source. Available at http://www.cdc.gov/tobacco/statehi/statehi_2001.htm

Tobacco use, particularly cigarette smoking, remains the number one cause of preventable disease and death in the United States.

in the few states that have done so, implementing adequately funded comprehensive statewide tobacco control programs can make a difference. Although our knowledge about tobacco control remains imperfect, according to Dr. Satcher's 2000 report on reducing tobacco use, we know more than enough to act now.

"It is clear that the major barrier to more rapid reductions in tobacco use is the effort of the tobacco industry to promote the use of tobacco products," Dr. Satcher said. "Our lack of greater progress in tobacco control is more the result of failure to implement proven strategies than it is the lack of knowledge about what to do."

For more information about programs that work, visit CDC's Web site at http://www.cdc.gov/tobacco or call 1/770/488-5705.

Clean Indoor Air: Critical Component of Comprehensive Tobacco Control

Smoke from burning cigarettes, pipes, and cigars and smoke exhaled by smokers has several names—secondhand smoke, passive smoke, environmental tobacco smoke. No matter what it's called, however, one thing is clear: it can kill nonsmokers who inhale it.

"Every year as many as 3,000 nonsmokers die of lung cancer and at least 35,000 nonsmokers die of heart disease caused by inhaling secondhand tobacco smoke," said Beverly Kingsley, MD, epidemiologist with CDC's Office on Smoking and Health (OSH).

Conclusive Evidence that Tobacco Smoke Is Harmful

In the late 1970s and early 1980s, scientific research began to suggest that exposure to tobacco smoke had ill effects on nonsmokers' health. In 1986, *The Health Consequences of Involuntary Smoking: A Report of the Surgeon General* was published. It concluded that secondhand smoke causes lung cancer and that the children of smoking parents have more respiratory infections than the children of nonsmokers.

Also in 1986, another report—this one by the National Research Council—reached the same conclusions. At that time, however, there was also the suggestion that secondhand smoke might be associated with heart disease.

"The evidence continued to mount," said Dr. Kingsley. "In 1992, the Environmental Protection Agency [EPA] was able to classify secondhand tobacco smoke as a Group A carcinogen. Those carcinogens are known to cause cancer in humans. Other examples are asbestos and benzene."

Also by 1992, enough evidence had been produced to show that secondhand smoke caused heart disease, and the American Heart Association declared that secondhand smoke is a major cause of preventable heart disease.

In 1997, the California Environmental Protection Agency extensively reviewed

the scientific research to date on secondhand smoke. Studies conducted between 1992 and 1997 contributed greatly to the weight of evidence. The results from these studies showed that a causal relationship indeed existed between secondhand smoke and lung cancer, as well as between secondhand smoke and heart disease.

In 2001, the Surgeon General's report (SGR) *Women and Smoking* came to the same conclusion, that exposure to secondhand smoke is a cause of lung cancer and coronary heart disease among women who are lifetime nonsmokers. Similarly, the SGR also recognized the health risks to infants posed by exposure to secondhand smoke during pregnancy.

"For children, the effects of breathing secondhand smoke are particularly disturbing," said Dr. Kingsley. "Every year, more than 10,000 infants of smoking mothers are born with lower than normal birth weight. About 2,000 cases of sudden infant death syndrome are directly caused by exposure to tobacco smoke. From 7,500 to 15,000 infants and toddlers are hospitalized with bronchitis or pneumonia because they breathe tobacco smoke, and well over 100 of them die. Older children—more than a million of them—get middle ear infections, asthma, or bronchitis. And those figures are repeated year after year."

According to 1996 data from the Current Population Survey and CDC's Behavioral Risk Factor Surveillance System, one-third to one-half of adults who smoke have children living with them, and 70% or more allow smoking in the home. The estimated number of children exposed at home to secondhand tobacco smoke ranges from 32,105 in Delaware to 1,120,051 in New York.

"CDC estimated that in 1996, more than 15 million children and adolescents nationwide were exposed to secondhand tobacco smoke in their homes," said Dr. Kingsley.

How Dangerous Is Secondhand Tobacco Smoke?

"Secondhand smoke contains thousands of chemicals, and more than 50 of them cause cancer," said Patricia Richter, PhD, toxicologist with OSH. "Examples are benzene, benzo[a]pyrene, nitrosamine compounds, vinyl chloride, and polonium-210. Some chemicals, such as hydrogen cyanide and sulfur dioxide, are irritants or systemic toxicants—they cause respiratory diseases. Others are reproductive toxicants—that is, they cause health problems for unborn babies. Examples of those are nicotine and carbon monoxide. Nicotine also increases heart rate and blood pressure, and it's implicated in cardiovascular damage along with carbon monoxide."

A new study just published in *JAMA* [the *Journal of the American Medical Association*] (2001;286:436-63) shows that after just 30 minutes of exposure, secondhand smoke had "abruptly reduced the CFVR" [coronary flow velocity reserve] of nonsmokers. "This provides direct evidence of a harmful effect of passive smoking on the coronary circulation of nonsmokers," the researchers said.

"Let me give you an analogy to help make the risks of secondhand smoke

"CDC estimated that in 1996, more than 15 million children and adolescents nationwide were exposed to secondhand tobacco smoke in their homes."

"That's the Achilles' heel for the tobacco companies—social acceptability."

clearer," said Terry Pechacek, PhD, Associate Director for Science at OSH. "How would you react if someone entered a restaurant or public place with a spray bottle filled with a brown liquid said to contain a dilute solution of 50 known carcinogens and asked if he or she could just spray some around the room? Chemically there is no difference between that request and someone asking to smoke indoors."

CDC Shares Science to Support Clean Indoor Air

CDC supports the states' clean indoor air programs in several ways. Through its National Tobacco Control Program (NTCP), CDC gives funds—$1 million to each state and somewhat less to each territory—for tobacco control programs.

"We also give the states resource materials such as research findings and Surgeon General reports," said Monica Eischen, CDC program consultant. "And we translate the research findings into information that the local people can use when they discuss secondhand smoke with those with the authority to enact legislation or pass ordinances."

"We also act as a clearinghouse of information about what's going on in each state," said Ms. Eischen. "We help state programs keep up-to-date on what's going on around the country related to clean indoor air."

Besides giving money to the states, CDC also gives money to the National Association of Local Boards of Health and to the National Association of County and City Health Organizations to work on clean indoor air issues.

"We also work with lots of nonprofit organizations, such as the American Cancer Society, American Lung Association, and American Heart Association." said Ms. Eischen. "In fact, we would be ineffective without them. They are our partners. We also partner with groups that work solely on tobacco issues, for example, Smokeless States, the Campaign for Tobacco-Free Kids, and the Americans for Nonsmokers' Rights Foundation."

CDC's National Tobacco Control Program

The NTCP has four goals, one of which is to eliminate nonsmokers' exposure to secondhand tobacco smoke.

"Of course, the other three goals would, if achieved, also eliminate exposure to secondhand smoke," said Ms. Eischen. "They are all aimed at getting people to stop smoking or not to start smoking. Clearly, if no one smoked, there would be no exposure. In addition, reducing the number of people who smoke also makes smoking less socially acceptable."

"That's the Achilles' heel for the tobacco companies—social acceptability," said Stanton Glantz, MD, School of Medicine, University of California at San Francisco. "If smoking is not socially acceptable, then the amount of tobacco that people buy will go down."

Tobacco Industry's Position

Experiences from the states and evidence from the tobacco companies' own internal documents show that the industry uses several key strategies to counter effective clean indoor air measures.

One strategy is to work for weak statewide laws that preempt the authority of local communities to pass stricter ordinances—for example, a state law that restricts smoking in restaurants but not in bars or taverns, and that preempts counties, cities, and towns from restricting smoking in those venues. According to Tim Filler, Associate Director of Americans for Nonsmokers' Rights, 18 states (as of September 2001) have laws with such preemption provisions.

Another strategy that tobacco companies use is to persuade the hospitality industry (primarily restaurants and bars) to oppose local clean air ordinances on the grounds that they will lose business if customers cannot smoke.

"The argument that bars and restaurants lose business if their customers can't smoke doesn't hold up on examination," said Dr. Kingsley. "Studies published in top-quality medical journals like *JAMA* and conducted in more than 20 cities around the country show that sales are not reduced. In fact, in California, sales actually went up slightly after the ban on smoking in restaurants went into effect."

"The health of the bartenders also got better," said James Repace, a former EPA senior science policy analyst and now a private consultant on secondhand smoke. "Just one month after smoking was banned in all bars in California, a study of 53 bartenders showed that their pulmonary function improved by 5% to 7%."

One other tobacco industry strategy is to promote the "accommodation" of smokers and nonsmokers indoors through the establishment of nonsmoking sections or through ventilation or air cleaning systems.

The scientific evidence, however, does not support the effectiveness of either approach. The 1986 Surgeon General's report concluded that "the simple separation of smokers from nonsmokers within the same airspace may reduce, but cannot eliminate, the exposure of nonsmokers to secondhand smoke." And, according to Mr. Repace, "In 1994, OSHA [the Occupational Safety and Health Administration] stated that the carcinogenicity of secondhand smoke discounts the use of general ventilation as an engineering control for this contaminant. In other words, general ventilation doesn't work."

"In fact, if we want ventilation to eliminate secondhand smoke," continued Mr. Repace, "we'd need tornado-like levels of air flow, which obviously is impractical."

The Public Health Solution: Smoke-Free Environments

The 2000 SGR *Reducing Tobacco Use* added to the considerable scientific evidence that smoke-free environments are the most effective method for reducing ETS exposure. Five separate *Healthy People 2010* objectives focus on this issue and seek optimal protection of nonsmokers through policies, regulations, and laws requiring smoke-free environments in all schools, work sites, and public places.

And now there's new evidence that the amount of tobacco smoke to which nonsmokers in the United States are exposed is going down, which is a good indication that restricting smoking in public places is having the desired effect. After nicotine enters the body of

The simple separation of smokers from nonsmokers within the same airspace may reduce, but cannot eliminate, the exposure of nonsmokers to secondhand smoke.

"Secondhand tobacco smoke remains a major public health concern, since more than half of American young people continue to be exposed to this known human carcinogen."

smokers or nonsmokers, it breaks down into several components, a major one being cotinine. The amount of cotinine in a person's blood indicates the amount of tobacco smoke that person has been exposed to. To determine the extent of nonsmokers' exposure to secondhand smoke, CDC measured cotinine in nonsmokers aged 3 years and older in the U.S. population during 1988–1991 and again in 1999, using blood samples from the National Health and Nutrition Examination Survey.

"One significant finding was the more than 75% decrease in serum cotinine levels for nonsmokers in the United States," said Jim Pirkle, MD, PhD, of CDC's Environmental Laboratory and coauthor of the *National Report on Human Exposure to Environmental Chemicals*.

Despite this dramatic decrease in people's exposure to tobacco smoke, Dr. Pirkle cautions against letting up on public health efforts to eliminate secondhand smoke from the environment. "Secondhand tobacco smoke remains a major public health concern, since more than half of American young people continue to be exposed to this known human carcinogen."

Young People and Tobacco: Preventing Addiction at Its Roots

Although prevention is the ultimate goal of tobacco control for young people, each day more than 6,000 young Americans try their first cigarette. If current smoking trends continue, 5 million of today's young people will die of tobacco-related diseases. "We hope to decrease smoking among young people by learning more about why they start smoking and by finding and promoting effective strategies to help young people avoid tobacco use," said Jeff McKenna, MS, CDC health communicator. The decision to use tobacco is nearly always made in the teen years, when young people greatly underestimate the true health risks and addictiveness of smoking.

The short-term health consequences of smoking on young people include a lower level of lung function, slower lung growth, shortness of breath, increased amounts of phlegm, and an increase in resting heart rate. As a result of the effects of smoking on the body, young people who smoke are not as physically fit—in terms of both performance and endurance—as they would be if they did not smoke. Moreover, cigarette smoking is associated with other risky behaviors: teens who smoke are three times more likely than nonsmokers to use alcohol, eight times more likely to use marijuana, and 22 times more likely to use cocaine.

The long-term health consequences of smoking among young people are reinforced by the fact that most young people who smoke daily continue to smoke throughout adulthood. In adults,

- The younger people are when they first start smoking, the more likely they are to become strongly addicted to nicotine.
- About 80% of adult daily smokers in the United States first tried a cigarette before they were 18 years old.
- In 1999, more than one-third of high school students reported using some form of tobacco in the past month, and more than a quarter were current cigarette smokers.

cigarette smoking causes heart disease, chronic lung disease, and stroke, and early signs of these diseases can be found in adolescents who smoke. In addition, smoking increases a person's risk of lung cancer, and this risk continues to rise as long as the person smokes. On average, someone who smokes a pack or more of cigarettes a day lives 7 years less than someone who never smoked.

According to the Surgeon General's report *Reducing Tobacco Use*, effective educational programs for preventing tobacco use could postpone or prevent smoking in 20% to 40% of U.S. adolescents. CDC and its partners are conducting and disseminating surveillance and research and are developing educational resources and counteradvertising campaigns to aid states in establishing effective programs to help young people avoid tobacco use.

Collecting Vital Information Through School Surveys

CDC has worked with states to develop and conduct two school surveys that collect information on tobacco use among young people: the Youth Tobacco Survey (YTS) and the Youth Risk Behavior Survey (YRBS). "Data from these surveys allow us to understand who is using tobacco products and why. We use the information to make our youth tobacco prevention programs more effective," said Charles (Wick) Warren, PhD, CDC statistician.

The YTS was first conducted in 1998 in three states—Florida, Mississippi, and Texas—that had requested help in collecting baseline data before establishing comprehensive tobacco control and prevention programs. The YRBS was introduced in 1991 to provide states with vital information on six risk behaviors: tobacco use, dietary behavior, physical activity, alcohol and other drug use, sexual behavior, and behaviors that may result in violence and unintentional injury. By the end of the 2001–2002 school year, 48 states and the District of Columbia will have conducted either the YTS, the YRBS, or both.

The YTS is conducted in middle and high schools and consists of a core questionnaire that assesses the prevalence of tobacco use, access to tobacco products (cigarettes, cigars, smokeless tobacco, pipes, bidis, and kreteks), exposure to pro- and anti-tobacco advertising, exposure to environmental tobacco smoke, attempts and desire to quit, and exposure to tobacco education in the school curriculum. The YRBS, which is

conducted in high schools, contains 12 tobacco-specific questions that are identically worded on the YTS.

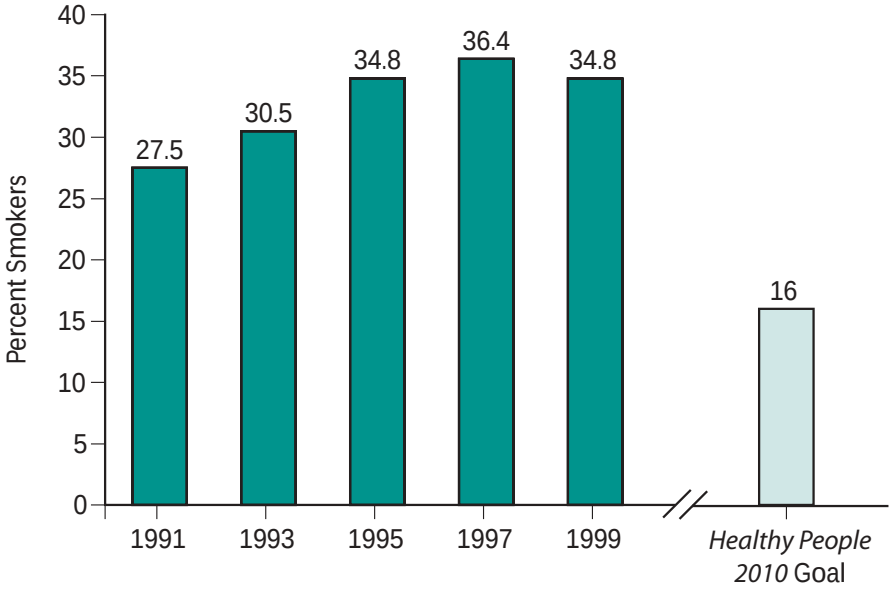
The participating states meet in Atlanta every other year to determine the content of the YTS core questionnaire. Each state can also add its own questions to collect information not included in the core questionnaire. The standardized YTS core allows states to compare their data with those of other states, with the tobacco data from the YRBS, and with data from the National Youth Tobacco Survey (NYTS). The NYTS, which is funded by the American Legacy Foundation and conducted with technical assistance from CDC, allows states to compare their data against national estimates.

YTS and YRBS data have many tobacco prevention-related uses:

- To establish a baseline for state tobacco control and prevention programs for young people.
- To evaluate the effectiveness of tobacco prevention and control programs and activities.
- To promote policies and funding to support comprehensive tobacco control and prevention programs.
- To monitor trends in tobacco use among middle and high school students.
- To monitor progress toward achieving the *Healthy People 2010* objectives.

Together, the YTS and YRBS provide states with data to support the design, establishment, and evaluation of prevention programs directed at young people as outlined in CDC's *Best Practices for Comprehensive Tobacco Control Programs*.

High School Students Who Reported Current Cigarette Smoking*—United States, 1991–1999



*Smoking one or more cigarettes during the previous 30 days.

Better Understanding the High Rates of Tobacco Use Among Young Adults

CDC has recently begun research to determine the cause of high rates of smoking among young adults (aged 18–24). CDC researchers are conducting focus groups of college students and college-aged nonstudents in the Atlanta area and are examining data on tobacco use among young adults collected through the National Health Interview Survey and the Monitoring the Future Survey. Focus group findings to date generally support data from the surveys. Information collected thus far indicates that

- Young adults not in college are more likely to smoke than are those in college.
- Most college students who smoke started before college, but they are more likely to become frequent smokers in college.
- Young adults are not interested in quitting smoking and are not motivated by health considerations. Focus group

participants indicated that the only factor that would make them consider quitting was a large increase in the price of cigarettes.
- Young adults report frequently being exposed to cigarette marketing in bars and clubs. Strategies include tobacco-themed bars (Camel bars and Marlboro bars, for example), free cigarettes, promotional gifts, and grand prize drawings for smokers only.
- In addition to marketing strategies, tobacco companies are also influencing college students by awarding scholarships to black students and by recruiting for employees on college campuses.

According to Linda Pederson, PhD, CDC epidemiologist, the long-term goal of this project is to use the knowledge gained from the research to develop effective programs to prevent college-aged Americans from starting to smoke and to help those who have already started smoking to quit.

Counteracting the Influence of Tobacco Advertising on Young People

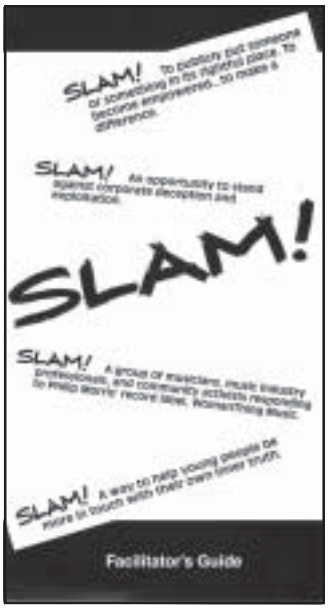
Even though the 1998 Master Settlement Agreement restricted tobacco advertising, young people are still exposed to highly appealing messages and images about tobacco use that portray smoking as glamorous, social, and normal. Effective countermarketing is essential to offset the effects of these messages. To improve the effectiveness of its countermarketing efforts, in 1996 CDC convened a panel of youth marketing and research experts through the Columbia University Prevention Research Center in New York City to advise the agency on countermarketing approaches. Panelists represented a variety of companies—including Levis, Adidas, and Motown—that cater to young people. In making their recommendations, the panel drew on their own private-sector experience as well as on the results of an extensive literature review and interviews with experts in tobacco control and health promotion.

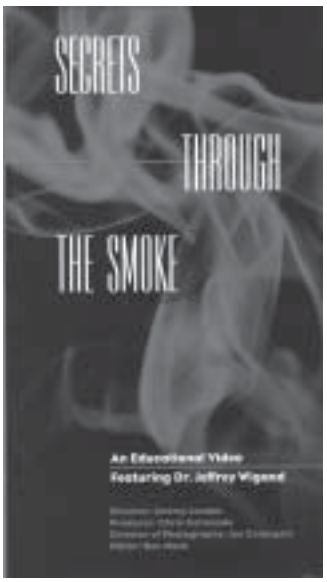
The panel recommended that countermarketing primarily target young people aged 11–15 years, the ages during which many smokers first try tobacco. Counteradvertising for this age group should

- Highlight a tobacco-free lifestyle as the majority lifestyle of diverse and interesting people and provide positive examples.
- Emphasize the dangers of tobacco use in an emotional and personal way.
- Offer young people empowerment and control, and avoid preaching.
- Use multiple voices and strategies.
- Offer constructive alternatives to tobacco use.
- Portray smoking as unacceptable and undesirable for everyone.

According to Mr. McKenna, CDC will update these recommendations regularly as new information becomes available.

To encourage states to use part of their Master Settlement Agreement funds for countermarketing campaigns, CDC has become more proactive in offering states materials and technical assistance for countermarketing, said Rebecca Murphy, MPH, CDC health communicator. In this expanded role, CDC will assist states in recruiting advertising agencies and reviewing their proposals. CDC will also provide states with training and technical





assistance on developing an effective counteradvertising campaign and evaluation plan.

Reaching Young People Through the Entertainment Industry

CDC has worked with the entertainment industry to produce materials for use in schools and communities to increase young people's awareness of the influences of the tobacco industry and to help them adopt healthy, tobacco-free lifestyles. Examples of recent products resulting from these collaborations include the following:

- **SLAM!**, a 15-minute video with an accompanying facilitator's guide, tells the story of Leslie Nuchow, a young singer/songwriter who was offered a lucrative opportunity to be promoted by a new record company, WomanThing Music. However, WomanThing Music was owned by Philip Morris Tobacco Company, and the only way to get the CD that WomanThing Music was producing was to buy two packs of Virginia Slims cigarettes. Feeling a need to speak out against these exploitative marketing tactics, Leslie organized the Virginia SLAM!, a counter-concert to protest the use of music to market cigarettes. SLAM! has since become a growing movement supported by celebrity artists, including Jill Sobule, Shawn Mullins, and the Indigo Girls, and has provided thousands of young people with the information and inspiration to resist the influence of the tobacco industry. CDC produced this video for middle and high schools students to help them be more aware of the power and pervasiveness of cigarette advertising. This year, CDC is supporting SLAM's outreach into college communities to expand Leslie's message to this important market.
- **Secrets Through the Smoke** is an hour-long video that documents the story of Jeffrey S. Wigand, PhD, subject of the Academy Award-nominated film *The Insider.* Dr. Wigand achieved national prominence in 1995 when he became the tobacco industry's highest-ranking former executive to publicly acknowledge the devastating effects of smoking on health. Dr. Wigand's conviction and courage led to his testifying in a Mississippi courtroom on the industry's knowledge of nicotine addiction and the health consequences of smoking. This testimony resulted in a landmark court decision that paved the way for the Master Settlement Agreement. In *Secrets Through the Smoke*, Dr. Wigand shares his experiences about the tobacco industry's manipulation of the truth. The video is intended primarily for use with middle and high school students but can also be used with community leaders and policymakers. The accompanying guides for facilitators—one for students and one for adult audiences—provide topics for critical thinking and discussion.
- **Women and Tobacco: Seven Deadly Myths** is a 17-minute video aimed specifically at young women. In this video, cover model and smoking cessation advocate

Christy Turlington explores common myths about smoking—such as *"If I quit, I'll get fat"*; *"Light cigarettes are safe"*; and *"I won't get hooked"*—to encourage women to become and stay smoke free. The video is accompanied by a facilitator's guide.

In addition, CDC recently collaborated with actor Jeremy London (*Party of Five* cast member and director of *Secrets Through the Smoke*) to produce two television spots with the tagline "Tobacco: It's Killing the Ones You Love." CDC continues to provide technical support to the entertainment community to ensure that tobacco use is accurately portrayed on screen.

CDC is also working with sports personalities to promote sports participation by young people as a healthy alternative to tobacco use. (See related article, page 19.)

Promoting the Critical Role of Parents

Recent research has documented that a strong sense of belonging to a family and being connected to parents greatly increases the likelihood that a teenager will avoid risk behaviors such as tobacco, alcohol, and drug use. However, establishing this connectedness can be a challenge. "Time-stressed parents, peer pressure, the influence of the media, and a desire for independence are common obstacles to young people maintaining close relationships with their parents," said Ralph Caraballo, PhD, MPH, CDC epidemiologist.

Because parents are largely untapped resources in the national effort to prevent tobacco use among young people, CDC is developing a campaign kit for states called *Got a Minute? Give It to Your Kid*. Scheduled to be released later this year, the kit consists of radio public service announcements, print advertisements, brochures, a poster, guidelines for launching a media campaign, and a review of research that supports the importance of parental involvement.

States can use any or all pieces of the kit to encourage parents to build and maintain strong relationships with their children and to raise parents' awareness of tobacco use as a serious issue. According to Reba Griffith, MPH, CDC health communicator, many parents see smoking as a minor risk compared with alcohol and drug use. However, in addition to the health problems that tobacco use alone can cause, it is associated with taking risks in other areas: young people who smoke are more likely than young people who don't smoke to use illicit drugs, to drink heavily, and to have unsafe sex.

Programs to Help Young People Quit Smoking: Exploring a New Frontier

Most young people who smoke say that they want to quit, but few are successful: three of four teenage smokers who try to quit, fail. Programs designed to help adults quit smoking have not been effective for young people, who are generally not motivated by factors such as health concerns that may be important to adults. The states see a need to provide programs to help young people stop using tobacco, but the scientific basis for such programs is lacking.

Celebrities such as cover model/entrepreneur Christy Turlington are influential supporters of countermarketing efforts.

To advance research on how best to help young people give up tobacco, the Robert Wood Johnson Foundation has spearheaded the Youth Tobacco Cessation Collaborative, an effort that also involves CDC, the National Cancer Institute (NCI), the National Institute on Drug Abuse, the American Cancer Society, the American Lung Association, and others. During 1998–1999, the collaborative developed and published *National Blueprint for Action: Youth and Young Adult Tobacco Use Cessation*. According to Micah Milton, MPH, CDC behavioral scientist, the 10-year goal of the blueprint is to ensure that all young tobacco users in the United States have access to effective programs to help them quit.

The first major initiative that has grown out of the blueprint is a systematic review of scientific evidence to answer the question, "What do we know about what works to help young people quit smoking?" CDC's primary funding partners in this effort are NCI and the Canadian Tobacco Research and Control Initiative. One of the major goals of the initiative is to bring researchers and practitioners together to begin translating research into effective programs.

Although the direction that these programs will take is currently not clear, some approaches are promising. These approaches are being outlined in a toolkit for practitioners that will be published early next year. The toolkit will provide

- Results of the systematic review of the scientific evidence on cessation programs.
- Tools for determining local needs and local capacity for establishing programs.
- Methods for determining which programs can most effectively meet local needs.
- Guidelines for evaluating programs.

A second initiative from the blueprint is now getting under way. Spearheaded by NCI with CDC participation, this research-focused effort will examine how best to measure patterns of tobacco use among teenagers and how to determine which behaviors are most likely to predict successfully giving up tobacco.

In addition, the Robert Wood Johnson Foundation recently approved an $11.2 million initiative to evaluate existing programs being used to help young people quit smoking. The purpose of this initiative is to determine what works in the real world by comparing the effectiveness of existing programs. CDC and NCI are co-funding the project and providing technical assistance.

For more information on CDC's efforts to combat tobacco use among young people, call the Office on Smoking and Health at 1/770/488-5705 and press 3, or visit the Web site at http://www.cdc.gov/tobacco.

Helping Kids Say 'No' to Tobacco, 'Yes' to Sports

Because youth sports are so popular in America, they are an ideal way for public health departments to reach U.S. youth with information about tobacco use, physical activity, and good nutrition. Athletes and coaches can be strong role models for kids, and increasingly they are willing to work with health departments to promote tobacco-free sports.

"CDC works with a wide range of partners to support sports-related media and education programs targeting children and teens," said Katy Curran, MS, ATC, CSCS, CDC health communicator. For example, 10 states receive CDC funds that have allowed them to expand their SmokeFree Soccer programs by establishing partnerships with community-based soccer organizations and public health groups. These states meet regularly to share the lessons they have learned through their tobacco-free sports programs.

Health departments should consider the many different ways they can make sports part of their tobacco control programs, Ms. Curran advised. Some health departments are promoting policies that prohibit tobacco use at sporting events. Others are teaming up with youth coaches to educate kids at special events, such as sports clinics. Another effective strategy is to recruit celebrity athletes, who can be powerful role models for kids and help health departments reach a large and diverse audience with their tobacco control messages. The following examples are just some of the creative ways that health departments are using sports to tackle tobacco use among children.

Tobacco-Free Policies in Rhode Island

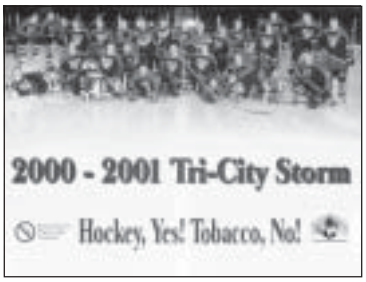
In Providence, Rhode Island, the Youth Sports Initiative helps other communities promote tobacco-free policies. Staff with the Rhode Island Department of Health's Tobacco Control Program have teamed up with the American Lung Association of Rhode Island and the Rhode Island Recreation and Parks Association to develop an action kit that includes model tobacco-free policy statements and town ordinances, along with advice on organizing a community to be tobacco-free, media advocacy tips, and a list of national sports resources.

Spotlight on Teen Advocates in Phoenix

Through the Phoenix Suns Benchwarmer Program, the Arizona Tobacco Education and Prevention Program shines a spotlight on teenagers who have been advocates against tobacco use in their communities. Teens and their chaperones receive center court recognition by a Phoenix Suns player during pregame activities. They also sit behind the players' bench throughout the game. This is one of many ways the Arizona Department of Health Services is promoting its tobacco-free messages to kids.

Celebrity Role Models in Lincoln

Tri-City Storm hockey players have teamed up with the Nebraska Health



Athletes can be persuasive advocates for a tobacco-free lifestyle.

Oregon State running back Ken Simenton is one of numerous sports stars urging youth not to use tobacco.

and Human Services System, Nebraska Buffalo County Tobacco Free Coalition, and Buffalo County Community Health Partners. The Tri-City Storm athletes appear in a poster that declares, "Hockey, Yes! Tobacco, No!" They distribute the posters at schools and special events. In addition, the coalition sponsors Storm games and produces related public service announcements, radio advertisements, and billboards.

Do These Programs Work?

Without question, sports are an effective way to reach youth with vital health information, said Ms. Curran. "Through program evaluation, we have shown that many of these tobacco-free sports activities are having an impact on kids' use of tobacco."

The American Heart Association Youth Fitness and Tobacco Education/ Prevention Program is a good example. The program, administered by the Florida Department of Health and Florida State University, aims to improve the overall health of children statewide by increasing the amount of time students in schools participate in regular fitness activities, reducing the number of kids who currently use or eventually will use tobacco, and reducing the number of kids who are exposed to secondhand smoke. The health department hired a team of professional evaluators who tested students before and after the project to assess how increased fitness activities affected tobacco use.

The evaluation's findings revealed significant improvements in the children's health, fitness, and knowledge. For example,

- Of all students who were smokers before the program, 36.7% of those in high school, 60% of those in middle school, and 100% of those in elementary school had quit smoking when they were surveyed after the program.
- Knowledge about the harms of tobacco use increased 9.3% among elementary students who participated in the fitness program for 1 year, and no such increase occurred for the comparison groups.
- Knowledge about the harms of tobacco use increased 26% among elementary students who had participated in the fitness program for 2 years.

After reviewing 2 years of evaluation results, the evaluators offered several recommendations for improving the program. For example, they advised the health department to expand the program by adding additional sites so that more students could be exposed to the messages, materials, and activities. The evaluators also recommended that the program begin early in the fall for two reasons: the schools could order equipment and supplies sooner, and the students could benefit from a year-long program.

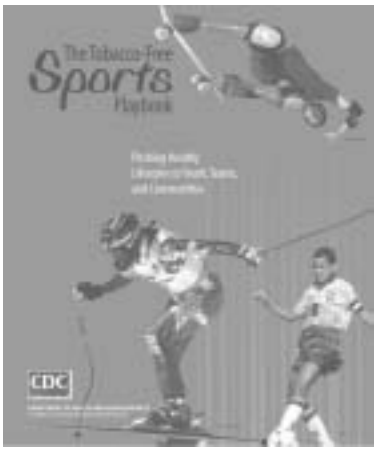
CDC Materials Available

To help health departments and others in their sports-related media and education programs targeting youth, CDC provides free sports posters, fact sheets, ads, and other materials. Also available are a SmokeFree Soccer logo, a PBS teen documentary called Soccer . . . Kickin' Butts, and the SmokeFree Soccer Coach's Kit, which features creative and fun drills that coaches can use to boost young players' soccer skills *and* teach them about the harm that

smoking can have on their bodies and their athletic performance.

A new CDC resource, *The Tobacco-Free Sports Playbook*, includes examples of what health departments, youth coaches, educators, and others are doing to promote tobacco-free sports. The book covers tobacco-free sports policies, campaigns featuring sports celebrities, stadium events, educational materials, and evaluations.

For more information about SmokeFree Soccer materials, visit http://www.smokefree.gov. To order or download CDC materials, go to http://www.cdc.gov/tobacco or call 1/770/488-5705 and press 3.



CDC's *Tobacco-Free Sports Playbook* features athletes from a variety of sports.

Sports Stars and Coaches Support Tobacco-Free Sports for Youth

Since CDC launched its sports initiative in 1996, many high-profile athletes and coaches have joined the tobacco-free sports movement. This is a dramatic turnabout from years past, when sports fans watched their idols use tobacco on the field, star in tobacco ads, or play in games sponsored by the tobacco industry.

"Kids are most vulnerable because they want to emulate these sports stars. And the teen years are such an impressionable time, since we know that most adult tobacco users got hooked when they were teenagers," said Katy Curran, MS, ATC, CSCS, who heads the Tobacco-Free Sports and Physical Activity Initiative for CDC's Office on Smoking and Health. "We now have an array of healthy role models from different sports arenas who support tobacco-free sports—role models like pro skateboarder Tony Hawk, Jen Davidson of the U.S. Women's Bobsled Team, and New York Yankees shortstop Derek Jeter."

For some of these athletes, the reasons for wanting to help kids resist tobacco are personal, she noted. Tracy Ducar, goalkeeper for the Boston Breakers soccer team, saw her grandfather die of emphysema after a lifetime of smoking. "I miss him greatly and know he would still be alive today if it weren't for tobacco," she said. "This is why I am a big advocate of the smoke-free cause. Every chance I have, I tell kids about the benefits of athletics and relate the story of my grandfather. Athletes, coaches, teachers, and anyone who cares about kids—we have a strong influence over these youth and can help spare them the pain of a life cut short by tobacco."

Retired NFL quarterback Troy Aikman stopped using spit tobacco because so many of his young fans wrote to him, begging him to quit. After he kicked the habit, he joined the Texas Cancer Council to launch a successful campaign against spit tobacco. "I understand the pressures encouraging kids to begin using spit tobacco," he said. "I hope that my speaking out about the dangers of this habit might cause some kids to think twice before they start." Aikman is featured in a compelling poster targeting kids (available from CDC at http://www.smokefree.gov).

Stars of the U.S. Women's National Soccer Team have been big advocates for tobacco-free sports. They are partners in the SmokeFree Soccer

Photo courtesy of UNIROYAL

Soccer stars such as Julie Foudy are healthy role models for kids around the world. Foudy is winner of the Fédération Internationale de Football Association (FIFA) Fair Play Award. Through the FIFA Fair Play program, the association supports the SmokeFree Soccer program and helps players with physical and mental disabilities to develop their skills as enthusiastic players.

program, launched in 1996 by the Secretary of Health and Human Services, CDC, and the National Cancer Institute. Women soccer stars such as Julie Foudy act as role models for kids as they travel around the country speaking at schools, conventions, and to the media about the benefits of being physically active and not smoking. Hundreds of thousands of motivational posters featuring women soccer stars have been distributed nationwide through soccer clubs, public health departments, and community organizations. CDC is now working with soccer players and organizations around the world to promote tobacco-free soccer. CDC also funds organizations such as Oral Health America, which oversees the National Spit Tobacco Education Program (NSTEP).

Spit Tobacco Has No Place In Sports

For decades, spit tobacco has been associated with baseball, but NSTEP is working hard to change that. With retired Major League Baseball player and National Baseball Hall of Fame broadcaster Joe Garagiola as its national chairman, the program has drawn widespread attention to the serious consequences of using smokeless tobacco.

"We're working with the tobacco control and dental communities to teach youth, parents, teachers, coaches, and athletes that spit tobacco is not a safe alternative to smoking, and it has no place in sports," said Paul Turner, director of NSTEP. Reaching kids is vitally important, he noted, because nearly one-fourth of all high school seniors have at least tried spit tobacco.

NSTEP also works with the dental and tobacco control communities on year-round, sustainable education about smokeless tobacco. "We tell people it doesn't matter if you smoke, dip, chew, or snort it," Mr. Turner noted. "Tobacco's harmful." NSTEP also goes to spring training every year to offer oral health screenings, brush biopsies, and cessation counseling to the players.

One of NSTEP's most compelling spokesmen was Bill Tuttle, a former Major League Baseball player who was diagnosed with oral cancer and underwent surgery that disfigured his face. "He and his wife, Gloria, educated a lot of kids and adults about the heath problems caused by spit tobacco," recalled Mr. Turner. "They often went to spring training and convinced a lot of ball players to stop. Bill died 3 years ago of cancer. It finally got him."

Because of its success in baseball, Oral Health America is now expanding NSTEP to reach fans of other sports, including auto racing, rodeo, hockey, fishing, and hunting. NSTEP has developed a wide range of materials that public health departments can use in their tobacco-free sports campaigns. For information about NSTEP and its educational materials, visit http://www.nstep.org or call Tina Grikmanis at 1/800/523-3438.

Movement Is Gaining Momentum

CDC is one of many organizations that support the tobacco-free sports movement. Other supporters include the World Health Organization (WHO),

National Cancer Institute, National Clearinghouse for Alcohol and Drug Information, National SAFE KIDS Campaign, International Olympic Committee, Fédération Internationale de Football Association (FIFA), sports leagues, and many youth organizations.

Because of this strong support, the tobacco-free sports movement is gaining momentum in many different sports arenas:

- The SmokeFree Soccer program recently went global when CDC teamed up with WHO and FIFA to promote tobacco-free messages worldwide to girls as well as boys. Women and men soccer stars from Australia, Brazil, Canada, China, and the United States have stepped forward to show their support for the program and appear in posters for kids.
- The Campaign for Tobacco-Free Kids has partnered with the Women's United Soccer Association (WUSA) to expand SmokeFree Soccer through smoke-free messages to WUSA fans and the involvement of athletes as spokespersons, role models, and activists. WUSA is the first professional athletic league to pledge not to advertise or sell tobacco products at its games. The league also is encouraging smoke-free environments in stadiums.
- A smoke-free soccer initiative has been launched by the South African Football Association (SAFA) and WHO. SAFA is using soccer as a platform to promote a healthy lifestyle among its players and the public. The South African Ministry of Health now has a mission to make all sports in the country tobacco-free. The country will be host to the 2003 Cricket World Cup.
- CDC and WHO are working toward a tobacco-free 2002 FIFA World Cup in Korea and Japan. The kick-off for the 2002 FIFA World Cup will fall on World No-Tobacco Day, May 31, 2002, in Seoul. WHO has declared the theme for World No-Tobacco Day to be "Tobacco-Free Sports."
- Some of the strongest smoke-free policies were in place during the 2000 Olympic Games in Sydney, where all venues and participants were smoke-free, and messages about tobacco-free and healthy lifestyles were promoted throughout the event.
- The 2002 Olympic and Paralympic Winter Games in Salt Lake City will be tobacco-free and will promote healthy lifestyle messages targeting young people.
- Extreme sports stars such as skateboarder Tony Hawk have spoken out against tobacco and drug use at the ESPN Winter X Games, which in 2001 alone attracted more than 83,000 spectators to Mount Snow, Vermont.

For more information about CDC's activities in tobacco-free sports, go to http://www.cdc.gov/tobacco/sports_initiatives_splash.htm or call 1/770/488-5705 and press 3.

The SmokeFree Soccer program recently went global when CDC teamed up with WHO and FIFA . . .

World Health Organization

FIFA

For the Good of the Game

Youth Surveillance Aids Global Tobacco Control Efforts

The GYTS is working very well indeed; it has been completed in 46 countries, and more than 50 others are participating during the 2001–2002 school year.

Tobacco control has world attention and tremendous momentum globally; the enormity of the health problems caused by tobacco are understood worldwide. Studies in the developed countries show that most people begin using tobacco before the age of 18 years, but information on young people's use of tobacco is not available for most developing countries. To help fill this data gap, the World Health Organization (WHO)—through its Tobacco Free Initiative—and CDC developed the Global Youth Tobacco Survey (GYTS).

The GYTS was begun as a means of providing baseline data to selected countries participating in a project on youth and tobacco. The survey is funded by the United Nations Fund for International Partnerships project on youth and tobacco.

The GYTS is working very well indeed; it has been completed in 46 countries, and more than 50 others are participating during the 2001–2002 school year. Response rates have been uniformly high. "The GYTS is expanding rapidly, and we are learning as we go," said Charles (Wick) Warren, PhD, CDC statistician and GYTS project director. By February 2002, more than 108 countries (over half of WHO member states) will have participated. "The GYTS may be the most successful international surveillance system ever done," said Rosemarie Henson, MSSW, MPH, Director, Office on Smoking and Health, CDC.

The success of the GYTS lies in its simplicity. It is inexpensive to administer, and the data can be processed and returned to countries rapidly. Planners decided that the survey would be school-based, to limit time and expense. The age group surveyed would be 13–15 (still in school, and similar to the age of respondents in the U.S. Youth Tobacco Survey conducted by CDC). The core component has 56 questions that cover tobacco use and related knowledge and attitudes, access to tobacco products, media and advertising exposure to tobacco, tobacco use as a subject in the school curriculum, smoking cessation, and environmental tobacco smoke, with optional questions added by countries.

School children taking the survey use answer sheets like those used for standardized tests. After the raw data are sent to CDC, they are sent to a contractor who builds a data file. The file is returned to CDC, where it is edited and weight-adjusted. "We produce about 200 tables for each country," Dr. Warren said. "The data belong to the country where they are collected."

CDC and WHO lead regional workshops to teach coordinators how to conduct the survey. The coordinators gather the data, and CDC processes them and provides ongoing technical assistance. Dr. Warren is very pleased with the GYTS research coordinators' involvement with this project. "They make an incredible, very positive commitment to make the project work," he said.

An analysis workshop was held in the Carribean in August 2001. "We taught report writing, fact sheets, how to understand the data and analyses using

Epi Info, and what to do with the information in terms of dissemination," said Dr. Warren. Some countries can do their own secondary analysis. Some lack the statistical software needed to analyze the survey data."We train to build capacity," said Dr. Warren.

The GYTS covers only cigarette use, but countries can customize it for other tobacco products. For instance, bidi use and applied tobacco products are covered in India. The Indian questionnaire is quite extensive. "India is a unique situation," Dr. Warren explained. "They have a central coordinator and one at each state level."

The data have helped with the development of good, solid tobacco control programs by participating countries. Some countries are already using the data from the GYTS to drive policy changes and to establish the level of environmental tobacco smoke (ETS) to which children are exposed. One troubling finding of the GYTS is that exposure of young people to ETS is very high in all countries.

Although survey data reflect variations among countries, the challenges of global tobacco control are clear, especially regarding ETS. More than half of the students in Jordan and Poland lived in a home where others smoked. In China, Fiji, the Russian Federation (Moscow), Sri Lanka, and Ukraine (Kiev), about half of the students were exposed to cigarette smoking from others in their home. In every country, at least 40% of students were exposed to cigarette smoking by other people in places away from their homes. Students reportedly think smoking is harmful and wish that it would be banned in public places.

The tobacco industry's message is unopposed in many countries. Overall, less than one-half of the students reported having been taught about the effects of tobacco use.

Another finding of the survey is that young people have easy access to tobacco products. Most students bought their cigarettes in a store without being challenged about their age. In most countries, over two-thirds of students reported seeing advertisements promoting cigarettes on billboards, in newspapers and magazines, and at public events. They also saw cigarette brand names at such events. Many had been offered free cigarettes by a representative of a tobacco company.

Some countries also have an early age of initiation for smoking. In Chongqing and Guangdong Provinces of China, Poland (rural), and Manicaland in Zimbabwe, nearly a third of the students who ever smoked cigarettes started smoking before the

Findings from the Global Youth Tobacco Survey

Access to tobacco is easy for young people. One-fifth or more of young people begin smoking cigarettes before the age of 10 years, increasing the likelihood of addiction, heavy smoking, and death from tobacco-related diseases.

They smoke at home, increasing ETS exposure of family members and influencing younger siblings.

Most young people currently smoking want to stop smoking, and over two-thirds have tried to stop. The traditional focus of youth prevention programs has been on preventing the start of tobacco use. Few have offered cessation programs to those who may already be smoking. Programs and interventions targeting young people therefore need to expand their focus to include both preventing starting and offering tailored youth cessation programs.

Across the countries, anti-tobacco advertising is rare. The influence of advertising by the tobacco industry is pronounced in most populations.

. . . nearly a third of the students who ever smoked cigarettes started smoking before the age of 10 years.

CDC's Global Tobacco Control Activities

1. WHO Collaborating Center on Global Tobacco Prevention and Control

CDC's Office on Smoking and Health (OSH) continues as a World Health Organization (WHO) Collaborating Center on global tobacco prevention and control. Priority contributions include (1) development of global surveillance, (2) facilitating knowledge exchange and application, (3) providing expertise through secondments to WHO and its regions, and (4) facilitating partnerships for strengthening national and global capacity.

2. WHO-CDC Cooperative Agreement

Through a cooperative agreement, CDC provides financial support to WHO for projects related to global surveillance, knowledge exchange, and capacity building.

3. PAHO-CDC Cooperative Agreement

CDC provides financial and technical assistance to the Pan American Health Organization (PAHO) to support its tobacco control activities in the region.

4. Global Tobacco Surveillance

CDC is partnering with WHO, the World Bank, UNICEF, the American Cancer Society, and other partners on a variety of surveillance projects, including the Global Youth Tobacco Survey, Global Health Professionals Survey, Global School Health Professional Surveys, Multi Risk Factor Survey, WHO Regional Survey, Country Profiles, and tracking of global tobacco legislation. Information gathered through these surveys is being compiled at CDC into an electronic Web-based system entitled NATIONS (National Tobacco Information Online System).

5. Knowledge Exchange and Application

- CDC is partnering with WHO, the Fédération Internationale de Football Association, and the International Olympic Committee to promote smoke-free sporting events and physical activity as a positive alternative to tobacco use.
- In collaboration with WHO, CDC is planning a tobacco control training institute to be held in New Delhi, India, in 2002. The institute will include in-depth instruction in policy approaches to, and program planning for, tobacco control.
- In partnership with WHO and the International Union for Health Promotion and Education, CDC is developing a seminar for media professionals in Francophone Africa in 2002. The seminar will help them increase their understanding of tobacco and health issues, communicate these facts to the public, and promote tobacco control.

6. Secondments and Support to WHO

- CDC has placed former OSH Director Michael Eriksen, ScD, in WHO Headquarters as Senior Advisor to the Non-Communicable Disease and Mental Health Cluster.
- To increase national and regional tobacco control capacity, CDC has placed health educator Karen Klimowski, MPH, in Zimbabwe to support tobacco control in the AFRO region.
- Under the auspices of the Western Pacific Regional Office, CDC has placed health policy analyst Burke Fishburn in Hanoi, Vietnam, to assist in tobacco control initiatives in Vietnam, Malaysia, and Laos.
- CDC is sharing expertise with WHO through a temporary assignment of health communicator Katy Curran, MS, ATC, CSCS, to assist WHO in expanding global smoke-free sports initiatives.
- CDC provides financial support for the placement of Clarence Pearson, a senior advisor to the WHO office at the United Nations in New York. Mr. Pearson facilitates the U.N. Taskforce on Tobacco.

7. Binational Commissions

Under DHHS leadership, CDC is collaborating with Mexico through the U.S.–Mexico Binational Commission and with Egypt on its Healthy Egyptian Initiative to enhance the capacity of these countries to promote tobacco control.

8. World Bank Collaboration

CDC provides the World Bank with financial and technical assistance for country-specific economic analyses and dissemination of the World Bank report *Curbing the Tobacco Epidemic.*

9. Framework Convention on Tobacco Control

Under DHHS leadership, CDC provides technical support to the U.S. Interagency Working Group, which coordinates the development of U.S. positions on the Framework Convention on Tobacco Control.

10. USTR Interagency Process on Tobacco Trade

Under DHHS leadership, CDC provides technical support to the U.S. Trade Representative (USTR) on tobacco trade issues. CDC's role in the interagency meetings is to advise USTR and other federal agencies of the potential public health impact of any tobacco-related trade action that is under consideration.

age of 10 years. The median for all countries was 26.4%. Initiation of smoking before 10 years was lowest in Venezuela (12.1%) and Costa Rica (10.9%).

Most current smokers said they wanted to stop, especially in China (Shandong and Tianjin), where the age of initiation is particularly low. Unfortunately, cessation programs are rare.

World No-Tobacco Day in May is used to release and promote the GYTS data. The Framework Convention for Tobacco Control will use the survey as a monitoring tool to track prevalence, media exposure, ETS, and access to and availability of tobacco.

For Further Reading

Warren CW, Riley L, Asma S, Eriksen MP, Green L, Blanton C, Loo C, Batchelor S, Yach D. *Tobacco use by youth: a surveillance report from the Global Youth Tobacco Survey project.* Bulletin of the World Health Organization 2000;78(7): 868–76.

School Programs to Prevent Tobacco Use

Although tobacco use has long been the leading preventable cause of death in the United States, most young people start this deadly habit not fully understanding the addictiveness of tobacco or the seriousness of the health consequences. Elementary and secondary students account for one-fifth of the U.S. population, or 53 million Americans. According to Lloyd J. Kolbe, PhD, Director of CDC's Division of Adolescent and School Health (DASH), schools offer an excellent opportunity to reach this large population of young people with important health messages before they have adopted unhealthy behaviors. Well-designed, well-implemented school programs to prevent tobacco use and addiction have proven effective. The benefits of school programs to prevent tobacco use among young people include the following:

- *Help prevent long-term health problems and premature death:* Cigarette smoking causes heart disease, stroke, chronic lung disease, and several different forms of cancer. If smoking rates remain the same, an estimated 5 million Americans younger than age 18 today will die prematurely of smoking-related illnesses.
- *Promote optimal health and decrease school days missed because of respiratory illnesses:* Cigarette smoking increases coughs, shortness of breath, and respiratory illness; decreases physical fitness; and adversely affects blood cholesterol levels.
- *Dramatically decrease the likelihood that a young person will be a regular tobacco user as an adult:* The younger people are when they start using tobacco, the more likely they are to become strongly addicted to nicotine. About 80% of all people who ever smoked daily first tried a cigarette before they were 18.

The following CDC resource materials on school programs to prevent tobacco use are available to the public through Healthy Youth, PO Box 8817, Silver Spring, Maryland 20907; telephone 888/231-6415; fax 888/282-7681; or E-mail HtmlResAnchor HealthyYouth@cdc.gov. Some of the documents may also be viewed or downloaded from the DASH Web site (www.cdc.gov/nccdphp/dash).

Guidelines for School Health Programs to Prevent Tobacco Use and Addiction.

Guidelines for School Health Programs: Preventing Tobacco Use and Addiction, At-A-Glance.

A Framework for Action: Helping Schools Prevent Tobacco Use and Addiction. In press, 2001.

School Health Index: A Self-Assessment and Planning Guide.

CDC currently funds 20 states for coordinated school health programs that include components to prevent tobacco use. More states are expected to be added in the future. In addition, CDC works closely with a variety of national nongovernmental organizations, including voluntary agencies and professional associations, to develop products and services that can help schools implement effective tobacco-use prevention programs.

CDC's Guidelines for School Health Programs to Prevent Tobacco Use and Addiction

The CDC *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction*, published in 1994, is the foundation for CDC's efforts to support tobacco prevention programs in schools. Developed by CDC staff in collaboration with experts from other federal agencies, state agencies, universities, voluntary organizations, and professional associations, the guidelines include specific recommendations to help states, districts, and schools adopt programs and policies that have been found to be most effective in preventing tobacco use among young people. According to Linda Crossett, RDH, CDC health scientist, the guidelines are intended to affect the whole school environment, not just the classroom program. "The aim is to develop a supportive environment that promotes a tobacco-free norm," she said.

CDC, in collaboration with its partners, has developed and distributed several tools to help states use the guidelines. The tools include the following:

- *School Health Index*—A self-assessment and planning tool designed to help schools identify the strengths and weaknesses of their physical activity, nutrition, and tobacco policies and programs and develop an action plan for improving student health. The index also provides an effective means for involving teachers, parents, students, and the community in improving school services.
- *Fit, Healthy, and Ready to Learn: A School Health Policy Guide*—This policy guide, developed with CDC support by the National Association of State Boards of Education, features sample policy language on physical activity, nutrition, and tobacco-use prevention, as well as data to support the policies and practical suggestions for putting them into action. More information is available through the Web site of the National Association of State Boards of Education (www.NASBE.org).

A Framework for Action

Research has shown that effective school programs are not conducted in isolation; they are but one critical part of comprehensive tobacco control programs that include other components such as community programs to reduce tobacco use, enforcement of minors' access laws, cessation programs, and countermarketing campaigns. *A Framework for Action: Helping Schools Prevent Tobacco Use and Addiction* was developed by DASH and CDC's Office on Smoking and Health (OSH) in response to requests for assistance from state and local education and health agencies. Based on CDC's *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction*, the document presents strategies and resources to help schools and communities jointly prevent tobacco use among young people. According to Ms. Crossett, the framework is not meant to be prescriptive. "Each state should determine its own priorities and resources to develop school policies and programs," she said. "However, the framework provides a starting point for ensuring that schools and communities are working together to prevent tobacco use among young people."

To accomplish the strategies outlined in the framework, DASH and OSH project officers have conducted training sessions that brought together staff of health and education agencies from 30 states to plan tobacco prevention programs for schools.

Programs That Work

In response to requests from schools for examples of effective prevention programs, CDC developed the Programs That Work project. Programs That Work identifies and disseminates programs that have been shown to be effective in reducing health risk behaviors, including tobacco use, among young people. Programs That Work is also a means of providing educators with information and training on effective programs.

Selecting Programs That Work

To identify prevention programs that meet the criteria for Programs That Work, CDC staff review electronic databases, published literature, meta-analyses, and other reports. Two external panels of experts, one comprising evaluation experts and the other program experts, review the programs and the evaluation studies. If both panels recommend that a program be adopted, CDC designates the program as a Program That Works. Thus far, the review panels have chosen the following two middle school tobacco prevention curricula as Programs That Work:

- *Project Towards No Tobacco Use (Project TNT)*— Targeted at seventh graders, *Project TNT* teaches students about the course of tobacco addiction and disease, the consequences of using tobacco, and the prevalence of tobacco use among their peers. The curriculum also focuses on helping young people develop effective coping skills, build self-esteem, understand how the media and advertisers influence teens to use tobacco products, and learn strategies for advocating no tobacco use. Students who participated in *Project TNT* were 25%–30% less likely to start using

Students who completed at least 60% of the 3-year Life Skills Training program were much less likely than other students to use tobacco, alcohol, and marijuana.

School programs to prevent tobacco use provide education during the years when the risk of becoming addicted to tobacco is greatest.

tobacco than students in the control group. In addition, *Project TNT* participants who already used tobacco reduced cigarette smoking by approximately 60% and eliminated smokeless tobacco use.

- *Life Skills Training*—Designed for students in grades 6 through 9, *Life Skills Training* helps students identify myths and misconceptions about tobacco, alcohol, and marijuana use; understand the physiological effects of smoking; and evaluate advertising techniques designed to manipulate consumer behavior. Because it is built on the theory that social influences to smoke, drink, or use drugs interact with individual vulnerability, this program also focuses on helping students cope with anxiety, communicate more effectively, improve their self-esteem, and develop successful relationships. Students who completed at least 60% of the 3-year *Life Skills Training* program were much less likely than other students to use tobacco, alcohol, and marijuana.

Disseminating Programs That Work

To assist in establishing these programs at the local level, CDC works with the developers to prepare the programs for dissemination and provides technical assistance to state and local education and health agencies who choose to use the programs. Included in this technical assistance are national workshops to train those who will train teachers. More information about Programs That Work is available on the DASH Web site (www.cdc.gov/nccdphp/dash).

Surveillance Is Key

CDC's DASH monitors school programs that prevent tobacco use through two surveillance systems: the School Health Policies and Programs Study (SHPPS) and the School Health Education Profiles.

SHPPS is a national survey periodically conducted to assess school health policies and programs—including those addressing tobacco use—at the state, district, school, and classroom levels. The largest and most comprehensive assessment of school health programs ever undertaken, SHPPS was originally conducted in 1994. It was most recently conducted last year. Between 1994 and 2000, the percentage of school districts requiring schools to teach tobacco-use prevention rose from 83% to 92%. During the same period, the percentage of schools nationwide with a tobacco-free environment rose from 36% to 64%. A tobacco-free environment prohibits all forms of tobacco use by students, school staff, and school visitors on school property, in school vehicles, and at school-sponsored functions away from school property.

The School Health Education Profiles are school-based surveys conducted biennially by state and local education and health agencies in representative samples of middle/junior and senior high schools. School principals and lead health education teachers complete self-administered questionnaires that assess health education policies and programs.

Prevention Evaluation Research Registry for Youth (PERRY)

Research synthesis activities in DASH include the establishment of PERRY, a database that contains a comprehensive set of citations and abstracts of intervention research for each of six adolescent risk behaviors: tobacco use, physical inactivity, poor nutrition, risky sexual behavior, violence and unintentional injury, and alcohol and other drug use. It includes both prevention evaluation research and nonevaluation background studies identified and abstracted from published and fugitive literature sources. In the near future, studies will be searchable via the Internet, providing a service to research and program planners worldwide.

School programs to prevent tobacco use provide education during the years when the risk of becoming addicted to tobacco is greatest. Through these programs, schools can provide a tobacco-free environment that establishes being tobacco-free as the norm and offers opportunities for positive role modeling. For more information, visit http://www.cdc.gov/nccdphp/dash.

Reimbursement for Smoking Cessation

Insurance coverage for smoking cessation programs has been formally requested of federal health care providers—will the private market follow suit?

Large purchasers of health insurance negotiate their benefits packages with health plans, and the federal government is no exception. Recognizing the need to reimburse for smoking cessation services, the Office of Personnel Management (OPM) has requested that federal insurers provide comprehensive coverage for tobacco dependence treatment, a policy change that will affect the approximately 2.3 million federal employees and their dependents who smoke. “The request is important not only because of the large number of beneficiaries, but also because it may serve as a model for other large purchasers to do the same,” said Corinne Husten, MD, MPH, CDC medical officer and chief of the Epidemiology Branch in the Office on Smoking and Health.

The OPM request follows recommendations made by the U.S. Surgeon General and the Community Preventive Services Task Force in reports on smoking, which cite findings that lack of reimbursement keeps smokers from taking advantage of effective tobacco treatment services. Since 1995, removing financial barriers to the use of cessation services has been one of the national health objectives.

There are nonfinancial barriers as well. Data show that only half of the smokers who saw a doctor in the past year were urged to quit, even though smoking is the single greatest preventable cause of illness and premature death in the United States. Physicians doubt their ability to help patients quit smoking, and they are concerned about offending patients by discussing

Nationwide, medical care costs attributable to smoking (or smoking-related disease) have been estimated by CDC to be more than $50 billion annually.

smoking cessation. However, even simple advice to quit increases quit rates, and studies have shown that patient satisfaction also increases when doctors discuss smoking. Physicians also say lack of time and reimbursement for such treatment keep them from recommending that patients stop smoking.

Reducing out-of-pocket costs can be very effective in inducing smokers to take advantage of smoking cessation interventions. At the Group Health Cooperative in Seattle, enrollees who were offered full coverage for nicotine replacement therapy in combination with behavioral therapy were four times as likely to use the services and four times as likely to succeed in their quit attempts.

People who smoke are at increased risk for heart disease, cancer, lung disease, and other smoking-related illnesses that contribute to more than 430,000 deaths a year. Nationwide, medical care costs attributable to smoking (or smoking-related disease) have been estimated by CDC to be more than $50 billion annually. In addition, the Office of Technology Assessment estimates the value of lost earnings and loss of productivity to be at least another $47 billion a year. The cost savings of prevention efforts would be seen within 3–4 years. A July 2001 study published in the *American Journal of Preventive Medicine* found that the clinical treatment of tobacco use was ranked second (after childhood immunization) among 30 effective preventive services in an analysis that looked at disease impact, effectiveness of intervention, and cost-effectiveness of the intervention. “This finding shows that a lot of money and additional years of life could be saved if treatment of tobacco was incorporated into routine health care visits,” said Dr. Husten.

Managed Care Looks at the Bottom Line

Managed care organizations (MCOs) are interested in preventive care. Health insurers claim that patients do not want smoking cessation services, but they also fear that reimbursement would lead to an overwhelming and expensive demand. They know that patient costs rise the first year of cessation, probably reflecting an episode of ill health that leads to quitting. But they believe that high attrition rates mean that the ultimate health care cost savings are likely to be enjoyed by a competitor. Furthermore, they worry that a good smoking cessation benefit may attract more smokers to the plan, and smokers are more expensive to insure because they use more services. However, CDC health educator Abby Rosenthal, MPH, says that health plans find that even when cessation programs are free and heavily promoted, only 5%–8% of their member smokers sign up; up to 20% might use a pharmacy benefit.

Several cost-benefit analysts argue that cessation does have a short-term payoff, in particular when the costs of heart disease and stroke are factored in. How long before MCOs see a return on investment? Estimates vary from 3 to 4 years, but most analysts agree that cessation services are more cost-effective than preventive services like mammography, which MCOs have enthusiastically adopted.

The Office of Personnel Management's *Federal Register* notice reads as follows:

Because of its widespread health effects, smoking is the leading preventable cause of death in the United States. We encourage plans to provide benefits for smoking cessation that follow the Public Health Service's treatment guidelines. Consistent with these guidelines, primary care visits for tobacco cessation should be covered with no copayment. Individual or group counseling for tobacco cessation should be covered with no copayment. Prescriptions for all Food and Drug Administration-approved medications for treatment of tobacco use should be covered with the usual pharmacy copayments.

Useful Resources to Quit Smoking

Health care professionals have new evidence and tools to help patients quit using tobacco, according to a report issued by the Public Health Service. To obtain this report, you can fax 1/301/594-2800 [Press 1]; or call 1/800/358-9295 for physician materials and a "You Can Quit Smoking" consumer guide; or write to Publications Clearinghouse, P.O. Box 8547, Silver Spring, MD 20907-8547.

Resources for Health Professionals

David P. Hopkins, Jonathan E. Fielding, and the Task Force on Community Preventive Services, editors. The Guide to Community Preventive Services: Tobacco Use Prevention and Control. Reviews, Recommendations, and Expert Commentary. *American Journal of Preventive Medicine* 2001:20 (Suppl 2):1–88.

Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. Rockville, Maryland: Department of Health and Human Services, Public Health Service, June 2000.

Resources for Smokers

You Can Quit Smoking
This is an on-line version of the consumer guide entitled *You Can Quit Smoking*. This popular Public Health Service brochure provides practical information and helpful tips for those who plan to quit smoking.
http://www.cdc.gov/tobacco/quit/canquit.htm

Don't Let Another Year Go Up In Smoke: Quit Tips
Are you one of most smokers who want to quit? Then try following this advice.
http://www.cdc.gov/tobacco/quit/quittip.htm

I QUIT!: What to Do When You're Sick of Smoking, Chewing, or Dipping
Cessation guide targeted to teens who are trying to quit cigarettes or smokeless tobacco. It includes tips for dealing with nicotine withdrawal and for handling the situations that may lead to relapse.
http://www.cdc.gov/tobacco/educational_materials/iquit.htm

Organizational Changes Needed

MCOs often add requirements that result in discouraging clients from taking advantage of cessation programs, according to Dr. Husten; for instance, they may offer reimbursement only for successful quit attempts or limit the number of attempts that are reimbursed. Programs may be available only at certain times of the year. Such restrictions limit members' use of cessation services, leading MCOs to conclude that the program wasn't used enough to justify its existence. Smokers may not even know about cessation programs offered by their health plan or other organizations.

"Restricting the use of cessation services reflects a basic misunderstanding of the nature of tobacco dependence," said Dr. Husten. "Just as patients with diabetes and hypertension are monitored and their medications and dietary interventions changed depending on the response to treatment, clinicians must continue to work with smokers until abstinence is achieved." Assisted quit attempts are more successful, but most smokers try to go it alone, she said. Most smokers try to quit at least 4–6 times before succeeding. The health care system and reimbursement need to be structured to support this process.

Public health professionals argue that insurers have yet to give smoking cessation interventions a fair assessment. An essential first step is to be sure that smokers are identified so physicians can discuss the need to quit; making tobacco use a "vital sign," as was is done with blood pressure, is a simple way to identify smokers and influence clinicians to counsel smokers at each office visit. The use of administrative datasets allows the plan to monitor how the physician is handling the tobacco use and include it in quality improvement efforts. Until such tracking is done, patients will continue to develop preventable tobacco-related diseases.

"We're where we were 25 years ago with blood pressure screening," noted Ms. Rosenthal. "In the late 70s, physicians did not screen for blood pressure. A concerted effort was needed to educate the public and providers about the need. We must do the same to get health care systems and providers to screen for tobacco use and to advise patients to quit."

Model programs such as that begun by Group Health Cooperative of Puget Sound in 1989 suggest that proper organizational support can boost the effectiveness of cessation interventions. After an aggressive recruitment effort, members were allowed to choose from a telephone counseling intervention or a group program (both included pharmacological treatment as well). Most selected telephone counseling. The program resulted in a strong decrease in smoking prevalence compared with the state as a whole. Also, the program paid for itself in reduced hospitalization costs in 3–4 years. (Smokers' health care costs increase annually, so reducing the number of smokers in a plan benefits the bottom line.)

Public health has raised insurers' awareness of the need for cessation services by adding tobacco-related practices to quality-of-care report cards issued by the managed care industry. The Health Plan Employer Data and Information Set (HEDIS®), a set of standardized performance measures

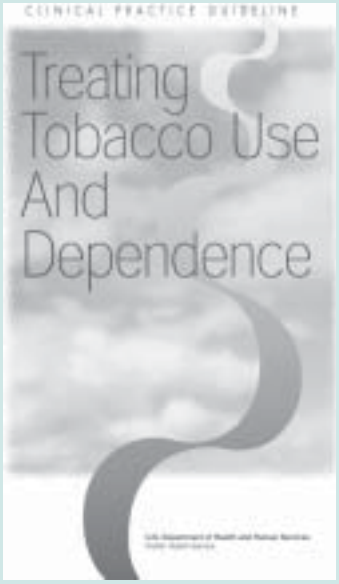
designed to enable purchasers and consumers to compare the performance of managed health care plans, includes a standardized survey of consumer experiences. The HEDIS® tobacco measure asks, if you smoke and were seen in the health plan in the past year, were you advised to quit? The strategy has met with some success, but MCOs still don't have the data that would persuade them to adopt cessation reimbursement. "It's too bad, because studies show that physician advice, counseling to stop smoking, and pharmacological aids really do increase quit rates and lower health care costs," said Dr. Husten.

Studies show that the recommendation of a clinician or any health care worker to quit smoking increases quit rates by 30%. More than 10 minutes of counseling doubles the quit rate. Individual, group, and telephone counseling can all help patients quit. "Just handing the patient self-help materials won't work," said Dr. Husten. "Person-to-person contact is a key factor."

What should providers say in counseling? "They need to offer patients support for the quit attempt and explain how to seek support from friends and family," Dr. Husten explained. "The provider should encourage the quit attempt, exhibit caring and concern, and help the smoker identify situations that put them at risk for relapse and develop strategies to deal with these situations."

Tobacco dependence treatments are both clinically effective and cost-effective in comparison with other medical and disease prevention interventions. The 2000 Public Health Service (PHS) guideline, *Treating Tobacco Use and Dependence: A Clinical Practice Guideline*, contains evidence-based information about pharmacologic therapies, which include bupropion SR, nicotine gum, patches, inhalers, and nasal sprays. The guideline urges health care insurers and purchasers to include, as a covered benefit, the counseling and pharmacotherapeutic treatments identified as effective and to pay clinicians for providing tobacco dependence treatment, just as they do for treating other chronic conditions (see sidebar,

Six Strategies for Systems Changes from the PHS Guideline *Treating Tobacco Use and Dependence*



1. Every clinic should implement a tobacco user identification system.
2. All health care systems should provide education, resources, and feedback to promote provider interventions.
3. Clinical sites should dedicate staff to provide tobacco dependence treatment and assess the delivery of this treatment in staff performance evaluations.
4. Hospitals should promote policies that support and provide tobacco dependence services.
5. Insurers and managed care organizations (MCOs) should include tobacco dependence treatments (both counseling and pharmacotherapy) as paid or covered services for all subscribers or members of health insurance packages.
6. Insurers and MCOs should reimburse clinicians and specialists for delivery of effective tobacco treatments and include these interventions among the defined duties of clinicians.

Recommendations from the 2000 Public Health Service report for primary care providers

Ask about tobacco use at every visit.

Advise smokers to quit.

Assess willingness to quit.

Assist the smoker in quitting.

Arrange follow-up contact.

"Six Strategies for Systems Changes from the PHS Guideline *Treating Tobacco Use and Dependence*.") "We know that both counseling and pharmacologic treatment are effective," noted Dr. Husten.

Ms. Rosenthal believes that large self-insured employers like General Motors (GM) will understand the value of tobacco-use treatment intervention sooner than some of the MCOs. That's because employers stand to benefit directly from reduced absenteeism and increased productivity, as well as reduced health care costs. GM, the nation's largest employer, is working with its top 11 MCOs to cover cessation services. Part of the impetus was that a corporate vice president had developed lung cancer. Also, GM has more retirees in its plans than currently employed workers (206,000 employees, 412,000 retirees). The health of these older members is more likely to be affected by tobacco-related illness, such as lung cancer, emphysema, and heart disease.

"Public health professionals should view corporate purchasers of health insurance as groups that can affect policy change," noted Ms. Rosenthal. "Groups of self-insured employers sometimes form purchasing cooperatives, and such groups should be actively recruited to participate in state-level tobacco control initiatives."

Further information about the PHS treatment guidelines may be found at http://www.surgeongeneral.gov/tobacco. More information about clinical practice guidelines is available at http://www.jama.ama-assn.org/issues/v283n24/toc.html. Copies of *Treating Tobacco Use and Dependence: A Clinical Practice Guideline* are available by calling 1/800/358-9295 or writing to Publications Clearinghouse, P.O. Box 8547, Silver Spring, MD 20907-8547.

Master Settlement Agreement Offers Funding Opportunity for Tobacco Control

In November 1998, the attorneys general of 46 states reached a historic agreement with the tobacco industry to settle pending and prospective lawsuits by states to recover Medicaid expenditures incurred as a result of tobacco use. Four states had previously reached individual settlement agreements. The agreements require tobacco companies to pay $246 billion to states over 25 years and to adhere to certain restrictions on tobacco advertising and promotion.

Current Investment in Tobacco Control

State legislatures were given the task of appropriating the funds received from these agreements. These funds represent an opportunity to invest in comprehensive, sustained, accountable tobacco control programs that, if implemented, could reduce tobacco-related health costs. According to an August 2001 report issued by the

National Conference of State Legislatures, 36.1% of the settlement money has been earmarked for health care in fiscal year (FY) 2002, and 5% was devoted to smoking prevention. In FY 2001, $654.9 million from settlement resources were devoted to tobacco control, according to *Investment in Tobacco Control*, a CDC report. The overall investment, including federal and national funding, is approximately $1 billion, amounting to only one-eighth of the tobacco industry's annual marketing budget.

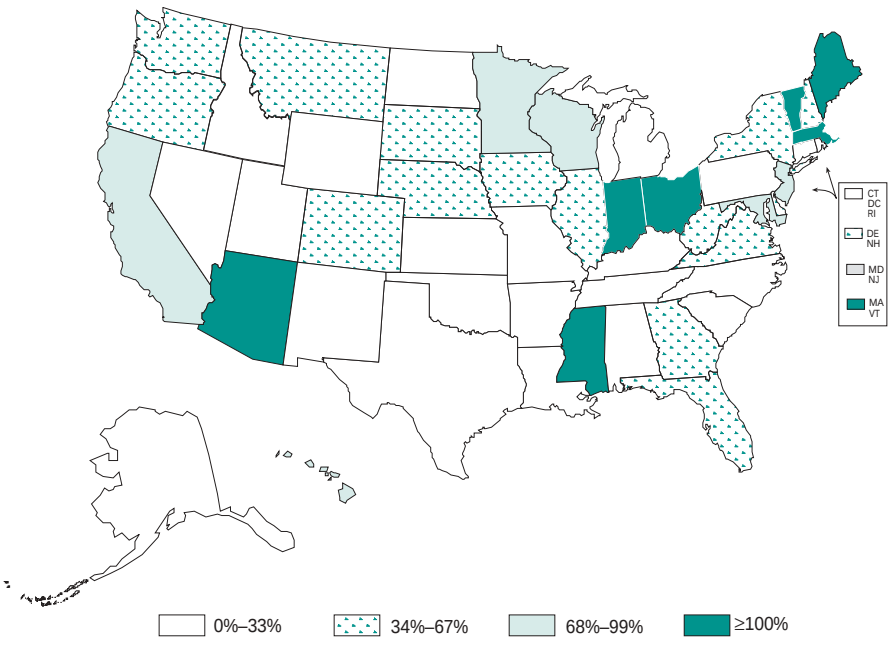
Public health officials say it should be possible to meet the state and national public health objectives for the year 2010 for tobacco control. "We know what works, and that's a comprehensive approach," said Rosemarie Henson, MSSW, MPH, director of CDC's Office on Smoking and Health (OSH). "But we also know how much each state would have to spend to implement these programs and make a difference in reducing the state's tobacco-related burden."

After the settlement, CDC was deluged with requests for technical assistance on the design of comprehensive tobacco control programs in different states. "After our experiences with states that had well-funded tobacco control programs, we realized that we could compile the information we were communicating into a guideline that all states could use," said Melissa Albuquerque, CDC health educator. The result was CDC's *Best Practices for Comprehensive Tobacco Control Programs*, an evidence-based guide to help states plan and establish effective tobacco control programs to prevent and reduce tobacco use. "The publication enabled us to diffuse the innovations that worked," noted Ms. Albuquerque. The *Best Practices* report also recommends levels of state funding if tobacco-related health costs are to be reduced. According to CDC's *Investment* report, seven states achieved the CDC minimum funding recommendations in fiscal year 2001. Per capita spending varies widely, from $0.10 to $20.69 per capita. Three states (Maine, Ohio, and Vermont) are spending more than $10 per capita. "There is a dose-response relationship between the level of investment in effective tobacco control programs and declines in cigarette consumption," said Terry Pechacek, PhD, OSH Associate Director for Science. "The states that invest the most have measurably greater success."

States that have made early investments in evidence-based comprehensive programs and have sustained them are seeing positive results. Most notably, California recently reported a more rapid decline in lung cancer rates than that seen in the rest of the nation.

"There is a dose-response relationship between the level of investment in effective tobacco control programs and declines in cigarette consumption."

Percentage of CDC-Recommended Minimum Tobacco Control Funding



Best Practices outlines the strategies for a comprehensive approach to statewide tobacco control programs. The programmatic and funding guidelines, drawn from the experiences of effective state programs, cover nine components:

1. Community programs to reduce tobacco use.
2. Chronic disease programs to reduce the burden of tobacco-related diseases.
3. School programs.
4. Enforcement.
5. Statewide programs.
6. Countermarketing.
7. Cessation programs.
8. Surveillance and evaluation.
9. Administration and management.

Other states have taken a more focused approach. Florida's program targets young people almost exclusively. Reductions in youth smoking rates between the 1998 baseline and the 2000 follow-up have been dramatic. The best results have been seen where community partnerships were most active. "The smoking rates among adults remain high, however," said Dr. Pechacek. "A program that includes all age groups would have a wider impact."

In Oregon, which has seen a 20% decline in per capita consumption from 1996 to 2000, smoking rates among adults, pregnant women, and young people have been reduced with less than the recommended funding. Drawing on the experiences of California, Massachusetts, and Arizona, the state developed an efficient program with strong school-based and countermarketing programs. However, researchers like CDC's Dr. Pechacek say that greater declines would be possible with a higher level of funding. For example, he pointed out, with current resources, only 30% of Oregon schools are being funded.

The comprehensive strategy works, according to the Surgeon General's report *Reducing Tobacco Use*, because programs that combine community interventions, countermarketing, policy and regulation, and evaluation and surveillance activities "bring about a shift in social norms and reduce the broad cultural acceptability of tobacco use."

Ms. Albuquerque emphasized that efforts must be sustained and evaluated; a 10% investment in surveillance and evaluation is recommended. Key indicators that should be monitored are per capita sales of cigarettes, lung cancer mortality rates, adult smoking prevalence, prevalence in disparate populations, youth smoking rates, smokeless tobacco use among youth, and exposure to environmental tobacco smoke.

Building the State Infrastructure

The burden of tobacco use varies widely by state, so each state needs to develop its own response. CDC's OSH currently funds all states to develop a comprehensive tobacco control program. Increased funding from the settlements has allowed states to expand their tobacco control programs. Specifically, states are having to rapidly expand their capacity to implement, among other program components, surveillance and evaluation functions to be accountable to state legislatures for results.

Cigarette Smoking Linked to Gum Diseases

Cigarette smoking is a major preventable risk factor for gum disease, according to a CDC study that found that current cigarette smokers are 4 times more likely than nonsmokers to develop periodontitis. The study used data gathered by the Third National Health and Nutrition Examination Survey (1988–1994) to examine the relationship between periodontal (gum) disease and cigarette smoking in adults aged 18 years and older.

An estimated 15 million U.S. adults have periodontal disease. Gingivitis, the mildest form of the disease, causes the gums to redden, swell, and bleed easily. Untreated gingivitis can advance to a more severe infection, periodontitis, characterized by loss of attachment between the root of the tooth and its supporting bone. If not controlled, bone loss can progress until the the tooth itself is eventually lost. According to *Oral Health in America*, a report released in 2000 by the U.S. Surgeon General, at least half of U.S. adults have gingivitis, and about one in five have the more severe form of destructive gum disease, or periodontitis.

The study also found that the risk for developing periodontitis increases with the number of cigarettes smoked daily. Moderate smokers who smoke less than half a pack a day are 3 times as likely as nonsmokers to have periodontitis, but people who smoke heavily, more than a pack and a half a day, have almost 6 times the risk of developing serious gum disease. The study was conducted by Scott Tomar, DMD, DrPH, formerly of CDC's Division of Oral Health and now Associate Professor, Division of Public Health Services and Research, University of Florida College of Dentistry, and Samira Asma, DDS, MPH, of CDC's Office on Smoking and Health.

"Data from these surveys clearly demonstrate that smoking plays an important role in periodontal destruction," noted Dr. Asma. "In fact, our study found that smokers with periodontitis are 3 to 4 times more likely than nonsmokers to lose some or all of their teeth. So, this is yet another reason that smoking prevention is important and beneficial to public health."

The study also found that quitting smoking reduces the chance of developing severe periodontal disease. Former smokers' chances of developing severe periodontitis decline the longer they remain tobacco free.

Smokers with periodontitis also are less likely to respond favorably to treatment of the infection. "Smoking impairs both the immune system and the healing mechanisms in the mouth," explained Robert E. Mecklenburg, DDS, MPH, coordinator of tobacco and oral health initiatives at the National Institutes for Health's National Cancer Institute. Dr. Mecklenburg noted that a very high percentage of intractable cases of periodontal disease are found among smokers. "We need to recognize that tobacco use adversely affects oral health and treatment prognosis."

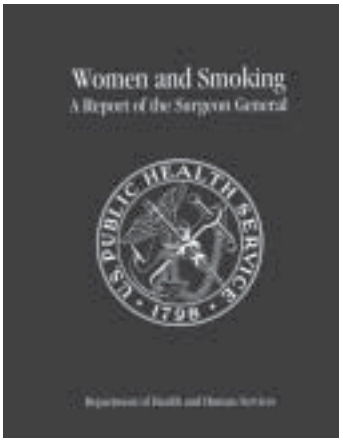
Added William R. Maas, DDS, MPH, Director, Division of Oral Health, CDC, "The results of this study show us that a large proportion of adult periodontitis can be prevented by avoiding cigarette smoking and that oral health care providers should help smokers to quit. Hopefully, this study will stimulate even

"Smokers with periodontitis are 3 to 4 times more likely than nonsmokers to lose some or all of their teeth."

more dental care providers to get involved with helping their patients quit smoking."

On the basis of numerous clinical trials, the Public Health Service clinical practice guideline *Treating Tobacco Use and Dependence* concluded that nonphysician clinicians, including dentists, are effective in helping their patients quit and that results are better if two or more clinicians, or professionals from different disciplines such as the patient's physician and dentist, provide help.

The Surgeon General's Report on Women and Smoking



The Surgeon General's report on smoking in 1980 correctly predicted that women were the second wave of victims of the tobacco epidemic—the second wave because women began smoking in large numbers 25 years later than men. A new report released in March 2001 follows up on that prediction with details of the tobacco epidemic's now fully realized effects on women. Surgeon General David Satcher, MD, PhD, summarized the report: "Women not only share the same health risk as men, but are also faced with health consequences that are unique to women, including pregnancy complications, problems with menstrual function, and cervical cancer."

Women now account for 39% of all smoking-related deaths each year in the United States, a proportion that has more than doubled since 1965, according to *Women and Smoking: A Report of the Surgeon General.* Said Virginia Ernster, PhD, Associate Director for Epidemiology, Prevention, and Control at the University of California at San Francisco Comprehensive Cancer Center and senior scientific editor of the report, "The overarching theme of the report is that smoking is a women's health issue. What drives this point home is that in 1987 lung cancer surpassed breast cancer as the leading cause of cancer death in women. Last year, 27,000 more women in the United States died of lung cancer than of breast cancer."

What Women Don't Know

One of the major recommendations of the report is to increase public awareness of the impact of smoking on women's health. Women simply don't know that if they smoke, they could have trouble getting pregnant, go through menopause at a younger age, or suffer increased risk of ectopic pregnancy and miscarriages.

Why are women misinformed about their own health risks? The media are partly to blame. A study by the American Council on Science and Health found that women's magazines carry a high number of cigarette advertisements and few health articles that address the negative aspects of smoking. The magazines examined in the study were found to be self-committed to general health, but failed to cover the number one cause of cancer death in women: lung cancer.

Why do girls start smoking? "A big reason is marketing," answered Corinne Husten, MD, MPH, CDC medical officer and chief of the Office on Smoking and Health's Epidemiology Branch. "Images of thin, glamorous models in ads resonate with girls. They feel that cigarettes can increase their social competence." Movies and television programs that glamorize smoking add to the power of such images. A review of the top 200 video rentals of 1996–1997 reports that characters smoked tobacco in 89% of movies. Cigarette brands were identified in 13% of movies that showed tobacco use; Marlboro (the most popular U.S. brand) was identified 5 times more often than any other brand. Seeing their idols with a cigarette gives young people the impression that more people smoke than do. "They tend to believe that 'everyone' is smoking," said Dr. Husten. Young women also underestimate how addictive smoking is.

In advertising and entertainment media, like TV and movies, women smokers are portrayed as thin, athletic, and independent. "Cigarette ads depict women smokers as free-spirited, attractive, glamorous, and athletic," commented Dr. Ernster. "In reality, many women who smoke are victims of smoking related-diseases that are often painful and fatal."

The tobacco industry promulgates the same themes in other countries. "We estimate that smoking prevalence among women varies markedly worldwide, from as low as 7% in developing countries to 24% in developed countries," said CDC Director Jeffrey P. Koplan, MD, MPH. "The rise in smoking among women around the world has coincided with aggressive Western-style tobacco advertising. One of the most common themes used in developing countries is that smoking is both a passport to and a symbol of a woman's emancipation, independence, and success."

Facts on Women and Tobacco

- Approximately 22 million adult women currently smoke cigarettes, and more than 165,000 women die each year from smoking-related diseases.
- Between the years of 1950 and 1996, deaths from lung cancer among women increased by 600%, exceeding breast cancer deaths every year since 1987.
- Smoking is a major cause of heart attack in both women and men.
- Filter-tips and "light" cigarettes are marketed to women, but they may not reduce risk.
- The smoking rate among female high school seniors increased from 25.8% in 1992 to 29.7% in 2000.
- Smoking has a damaging effect on women's reproductive health and is associated with reduced fertility and early menopause.
- The health benefits of quitting smoking far outweigh any risks from weight gain caused by quitting smoking. Research shows that the average weight gain after quitting smoking is only 5 pounds and that it can be controlled through diet and exercise.
- It's never too late to quit. If you don't succeed in quitting the first time, keep trying.

Deglamorizing the Habit

The rise of smoking prevalence among teenage girls in the 1990s is alarming. CDC surveillance reports show that 30% of high school senior girls have smoked in the past 30 days. To counter the increase, tobacco use must be deglamorized and discouraged. Secretary of Health and Human Services Tommy Thompson said, "Smoking is a critical women's health issue that must be addressed on all fronts. We must begin this battle in schools and in our communities before girls even begin to smoke, and we must

"Anything that kills as many women from as many diseases as smoking does is clearly a women's issue."

share with teenage girls that smoking is not only harmful, but it is not glamorous. Society must not glorify smoking."

Sports may help girls resist the appeal of smoking, noted Alyssa Easton, PhD, MD, CDC epidemiologist. Not only does participating in sports improve self-esteem, it also provides young women with positive role models and good reasons not to take up smoking.

The report also addresses health disparities related to gender. Because most of the research on smoking-related disease does not specifically look at gender differences, more research is needed. "Some studies suggest that women may have a higher risk of developing lung cancer than men, but other studies do not show this pattern and conclusions cannot be drawn yet," said Dr. Easton. Although men and women are equally likely to quit, questions also remain about whether nicotine replacement therapies such as the patch or gum affect women differently from men. "We need more intervention studies that look at gender differences," said Dr. Husten.

Comprehensive statewide tobacco control programs are effective in reducing and preventing tobacco use, says the report. "States should be enacting comprehensive statewide programs," noted Dr. Easton. "However, settlement money is not being effectively utilized, as described in CDC's *Best Practices for Comprehensive Tobacco Control Programs*. Only seven states—Arizona, California, Florida, Maine, Massachusetts, Mississippi, and Vermont—are meeting or exceeding *Best Practices* lower-bound funding recommendations." Where smoking rates have been reduced, dramatic public health benefits have been observed. In California, for example, declines in the rate of lung cancer among women were recently observed, even though nationally lung cancer rates are still increasing.

Tobacco Control: A Women's Issue

One aim of the report is to encourage a more vocal constituency on issues related to women and smoking. Efforts from women's and girls' organizations, magazines, policymakers, medical groups, and advocacy groups are needed to highlight lung cancer and other smoking-related diseases among women. Said Dr. Satcher, "We know more than enough to prevent and reduce tobacco use. Now we must commit the attention and resources to translate this knowledge into action to save women's lives."

"Anything that kills as many women from as many diseases as smoking does is clearly a women's issue," said Dr. Ernster. "We shouldn't tolerate the targeting of women by the tobacco industry any longer."

SAMMEC on the Internet

The Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) software is a computational program used to estimate the number of annual deaths, years of potential life lost (YPLL), excess medical expenditures, and lost future productivity caused by smoking for the nation and states. A project nearing completion will allow users to estimate the disease impact of smoking on adult and infant populations by using two Internet-based SAMMEC software programs: Adult SAMMEC and MCH (Maternal and Child Health) SAMMEC. The products are in the final stages of development in anticipation of a December release. "The Internet format will make the products easier to use and even more accessible to everyone," said Carole Rivera, BS, a CDC public health analyst and prenatal smoking cessation team leader in the Division of Reproductive Health. "Users can easily compute health and economic outcome measures, enter and save data, and print reports."

The health outcome measures in the Adult SAMMEC program are derived using smoking prevalence data from the National Health Interview Survey and the Behavioral Risk Factor Surveillance System, as well as relative risk estimates from the American Cancer Society's Cancer Prevention Study-II (6-year follow-up). Smoking-attributable deaths and YPLLs must be estimated because "only a couple of states collect data on smoking on death certificates," according to Jeffrey Fellows, PhD, a CDC health economist in the Office on Smoking and Health.

The MCH SAMMEC model is new and will allow users to estimate annual infant deaths and neonatal direct health care costs attributable to maternal smoking. Prevalence data on maternal smoking are from the birth certificate, and mortality data are from the linked birth/death file, both of which are part of the National Vital Statistics System. "Economic costs are from a combination of measures of resource utilization from PRAMS [Pregnancy Risk Assessment Monitoring System] data with the average costs of that resource usage from private sector claims data," said E. Kathleen Adams, PhD, a CDC health economist in the Division of Reproductive Health and Associate Professor, Emory University. Users will be able to either rely on the defaults or enter their own data for the selected population to produce smoking-attributable estimates and perform analyses.

"SAMMEC has been widely used by state and federal researchers, policymakers, and advocates to estimate the disease impact of smoking and to obtain funding for tobacco control activities," said Dr. Fellows. "These studies continue to show that smoking is the single most preventable cause of premature death in the United States, accounting for over 400,000 deaths each year and about $100 billion in excess medical expenditures and productivity losses combined."

"SAMMEC has been widely used by state and federal researchers, policymakers, and advocates to estimate the disease impact of smoking and to obtain funding for tobacco control activities."

Prenatal Smoking Databook Points to Need for Better Services

The neonatal costs associated with maternal smoking, which include low birth weight and sudden infant death syndrome, can be long-term.

Most smoking-related medical costs on maternal and child health occur during pregnancy and are short-term. However, the neonatal costs associated with maternal smoking, which include low birth weight and sudden infant death syndrome, can be long-term. Poor health effects for mothers and their children also result when women relapse into smoking after pregnancy (postpartum recidivism). These problems are compounded by a lack of services. Counseling is the only cessation intervention recommended for pregnant women, and it is not widely available and often is not covered by insurance.

State health departments and health advocates concerned about the need for increased services will welcome CDC's *Prenatal Smoking Databook*, a tool for state-by-state analysis of data on smoking during pregnancy. National data are included in separate tables for comparison purposes. Information by state includes 36–38 data elements printed on a 2-page spread. For example, the number of days in neonatal intensive care units is listed for each state and for the nation (for comparison purposes). Because economic data are included, the information can be valuable to anyone seeking funding for tobacco control, explained Carole Rivera, BS, a CDC public health analyst and prenatal smoking cessation team leader in the Division of Reproductive Health.

Data included in the book are birth statistics; prevalence of smoking by age, race, ethnicity, and education; children's tobacco-related illness and death; and smoking-attributable neonatal health care dollars. Because Medicaid pays for 40%–50% of the births within the average state, policy information on the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC program) and Title V is included. "Other policy topics are also covered, making it a great tool for lobbyists and tobacco-control advocates," said Ms. Rivera. For each state, readers can find out if Medicare coverage is available for smoking cessation interventions and if the state supports maternal cessation counseling and regular training for physicians. (Twenty-two states do.)

"A unique feature of this year's *Databook*, which is the first edition, is that some of the pages will be printed and also available on-line," said Ms. Rivera. Hereafter, all of the pages will be available on-line only.

One example of how the data can be used is seen in the American Legacy Foundation's plans to include facts from the *Databook* in a package of briefing materials for gubernatorial spouses. The materials are in support of a national campaign early next year to encourage pregnant women to quit smoking.

For further information or to obtain a copy of the *Databook*, contact Brenda Nishimura at 770/488-6312.

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Conferences

2001 National Conference on Tobacco or Health

The 2001 National Conference on Tobacco or Health will take place November 27–29 at the New Orleans Marriott in New Orleans, Louisiana. The 2001 National Conference will bring together more than 2,000 tobacco control experts and advocates from the local, state, national, and international levels and other professionals to share new ideas and strategies for reducing the harms caused by tobacco use. For more information, call 301/294-5400, E-mail conferenceinfo@feddata.com, or visit http://www.tobaccocontrolconference.org.

National Association of Health Data Organizations (NAHDO) 16th Annual Meeting

"Health Information Initiatives 2001: The Roadmap to the Future" will be held December 3–4, 2001, at the J.W. Marriott Hotel in Washington, D.C. The state invitational meeting (for state officials) will take place December 2, 2001. Conference sessions include Establishing Medicaid and Public Health Partnerships, Maximizing the Utility of Discharge Data, and Integrated Health Information. For up-to-date details on the conference, visit http://www.nahdo.org/meetings.htm. For more information, contact Pat Schumacher at prs5@cdc.gov or 770/488-8375.

Seventh Annual Maternal and Child Health Epidemiology (MCH EPI) Conference

The 2001 Maternal and Child Health Epidemiology Conference will be held December 12–13 in Clearwater Beach, Florida, at the Sheraton Sand Key Hotel. The theme is "Enhancing Competencies for Informed Decision Making in Maternal and Child Health Outcomes." Hosted by the Lawton and Rhea Chiles Center for Healthy Mothers and Babies, the conference brings together health professionals who work with maternal and child health data, programs, and policies. For more information, visit http://www.publichealth.usf.edu/conted/mchepi01.html or contact Ms. Jenni Genz at 813/974-6695.

Healthy Kids, Healthy Communities: Integrating Health and Education

CDC's 2002 National Leadership Conference to strengthen HIV/AIDS Education and Coordinated School Health Programs will convene February 10–13, 2002, at the Renaissance Hotel in Washington, D.C. The conference is cosponsored by CDC's Division of Adolescent and School Health and the Society of State Directors of Health, Physical Education, and Recreation. Each year, this conference offers an outstanding opportunity for learning and networking among dedicated professionals in the fields of HIV/AIDS prevention and school health, including school health faculty, administrators, and policymakers; physical education and health educators; school nurses and student counselors; and others with an interest in promoting health among youth. Information about the 2001 Leadership Conference and the program for the 2002 Leadership Conference can be found at http://www.cdc.gov/nccdphp/dash, or for more information, contact CDC health education specialist Holly Conner at hcc3@cdc.gov.

13th Annual Art and Science of Health Promotion Conference

The 13th Annual Art and Science of Health Promotion conference will take place February 25–March 1, 2002, at Harveys Resort in Lake Tahoe, Nevada. This year's theme is "Creating a New Vision for Health Promotion." The conference is a collaborative effort involving a wide range of professional associations that represent key health promotion disciplines, including exercise physiologists, health educators, nurses, nutritionists, physicians, and psychologists. For more information or to register, call 248/682-0707, E-mail inquiries@healthpromotionjournal.com, or visit http://www.healthpromotionconference.org.

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16th National Conference on Chronic Disease Prevention and Control

NCCDPHP will host its 16th annual conference February 27–March 1, 2002, at the Sheraton Atlanta Hotel in Atlanta, Georgia. Participants will learn about emerging chronic disease issues, data applications, and intervention research; network with health and other professionals; develop new working relationships; and discover what others are doing in communications, training, policy, and partnerships. For more information, E-mail Dale Wilson at dnw3@cdc.gov or visit http://www.cdc.gov/nccdphp/conference.

National Oral Health Conference

"Building a Framework for Improving Oral Health" is the theme of the next National Oral Health Conference, to be held Monday, April 29 through Wednesday, May 1, 2002, at the Sheraton Ferncroft in Danvers, Massachusetts. This national meeting focuses on exchanging scientific and public health information on oral health, provides a forum for sharing innovative and successful oral health programs in a variety of settings, and promotes discussion of strategies for improving oral health through community, state, national and foundation initiatives. The meeting is sponsored by the Association of State and Territorial Dental Directors, the American Association of Public Health Dentistry, the CDC's Division of Oral Health, the Centers for Medicare and Medicaid Services, and the Health Resources and Services Administration's Maternal and Child Health Bureau. More information about the conference is available at the following Web sites: http://www.astdd.org or http://www.aaphd.org.

CDC 2002 Diabetes Translation Conference

The CDC Diabetes Translation Conference 2002 will be held May 6–9, 2002, at the Millennium Hotel, 200 South 4th Street, St. Louis, Missouri. You may call for reservations at 314/241-9500. This conference will be celebrating the 25th Anniversary of the Division of Diabetes Translation. The conference will bring together a wide constituency of local, state, federal, territorial, and private-sector diabetes partners to explore science, policy, education, and planning issues as they relate to reducing the burden of diabetes. Visit http://www.cdc.gov/diabetes for up-to-date information about the conference.

Communications

Diabetes and Women's Health Across the Life Stages: A Public Health Perspective

Diabetes is a serious and costly disease that touches almost every family in America. CDC has released the first major publication to address the unique impact diabetes has on women. *Diabetes and Women's Health Across the Life Stages: A Public Health Perspective* focuses on the specific issues that make diabetes a serious women's health issue, such as puberty and hormonal changes during adolescence, childbearing and contraception in the reproductive years, menopause and access to health care in the middle years, and poverty and disability in the older years. As a follow-up to the publication of the monograph, CDC is forming a task force to develop a national public health action plan that will raise public awareness and outline programs to prevent and control diabetes in women. For more information, please visit CDC's Web site at http://www.cdc.gov/diabetes/ or call 1/770/488-5705 and press 3.

New CDC Recommendations on Fluoride Released

Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States, released in August 2001, provides guidance to dental and health care providers, public health officials, and the general public on the best practices in using fluoride to prevent tooth decay. The report recommends continuing to expand fluoridation of community drinking water, frequent use of small amounts of fluoride, using supplements and high-concentration fluoride products judiciously, parental monitoring of the fluoride intake of children younger than 6 years of age, and labeling bottled water with fluoride concentration. Fluoridation of drinking water is credited for the dramatic reductions in tooth decay in U.S. residents. The complete report is available at http://www.cdc.gov/mmwr.

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Information Sources

Available Now on CDC's Web Site

NCCDPHP is pleased to announce the new Chronic Disease Prevention (CDP) Databases Web site, available at http://www.cdc.gov/cdp. The site features the following databases: NCCDPHP Publications Database, Health Promotion and Education Database, Cancer Prevention and Control Database, Prenatal Smoking Cessation Database, and the Epilepsy Education and Prevention Activities Database. These bibliographic databases are developed to provide health professionals access to information on chronic disease prevention and health promotion. Updated monthly, the databases provide over 40,000 bibliographic citations and abstracts of materials. Full text is provided for selected publications. The databases also describe chronic disease prevention and health promotion programs. For more information on the CDP Databases, contact Reba Norman or Jan Stansell at 770/488-5080 or by E-mail (rnorman@cdc.gov; jstansell@cdc.gov).

NCCDPHP News

New Director of the Office on Smoking and Health

Rosemarie Henson, MSSW, MPH, has been named as the new director of the Office on Smoking and Health, NCCDPHP. Her background in public health includes working with the New York City Department of Aging and the Massachusetts Department of Health before coming to CDC in 1990. At CDC, she initially worked for NCCDPHP in HIV policy and then became Chief, Program Services Branch, Division of Cancer Prevention and Control. She directed the National Breast and Cervical Cancer Early Detection Program, which provides screening services for millions of uninsured and underinsured women nationwide. In June 2000, Ms. Henson was selected as Deputy Director, National Center for Environmental Health, where she dealt with issues such as asthma, genetics, biomonitoring, and tobacco research. "Her wealth of experience in linking policy with science and her commitment to and history of building positive relationships with outside partners will be valuable assets to our center," said James S. Marks, MD, MPH, Director, NCCDPHP.

Associate Director for Science Selected

Donna F. Stroup, PhD, MSc, was selected as the Associate Director for Science, NCCDPHP. She received a bachelor's degree in math from Vanderbilt, a master's and PhD in mathematical statistics from Princeton, and a master of science in community medicine from Cambridge. Past positions include Associate Director for Science for the Epidemiology Program Office (EPO), CDC, and Director, Division of Surveillance and Epidemiology, EPO. She also has published extensively on various subjects, including statistics and epidemiology, surveillance, and training of public health scientists. Dr. Stroup is a well-known and respected scientist and currently serves as adjunct professor at the Rollins School of Public Health at Emory University, on the editorial board of the *American Statistician*, and as an associate editor of the *Journal of the American Statistical Association.*

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