



Recommendations and Reports

Strategies For Reducing Exposure to Environmental Tobacco Smoke, Increasing Tobacco-Use Cessation, and Reducing Initiation in Communities and Health-Care Systems

A Report on Recommendations of the Task Force on Community Preventive Services

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention (CDC)

Atlanta, GA 30333



The MMWR series of publications is published by the Epidemiology Program Office, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30333.

SUGGESTED CITATION

Centers for Disease Control and Prevention. Strategies for reducing exposure to environmental tobacco smoke, increasing tobacco-use cessation, and reducing initiation in communities and health-care systems. A report on recommendations of the Task Force on Community Preventive Services. *MMWR* 2000;49(No. RR-12): [inclusive page numbers].

Centers for Disease Control and Prevention Jeffrey P. Koplan, M.D., M.P.H. Director The production of this report as an MMWR serial publication was coordinated in Epidemiology Program Office Barbara R. Holloway, M.P.H. Acting Director Office of Scientific and Health Communications John W. Ward, M.D. Director Editor, MMWR Series CDC Recommendations and Reports Suzanne M. Hewitt, M.P.A. Managing Editor Valerie R. Johnson Project Editor Lynda G. Cupell Morie M. Higgins Visual Information Specialist Michele D. Renshaw Erica R. Shaver Information Technology Specialists

Contents

Background	1
Introduction	
Methods	
Results	
Use of the Recommendations in Communities and Health-Care Systems	
Additional Information About the <i>Community Guide</i>	
References	

Task Force on Community Preventive Services

CHAIR

Caswell A. Evans, Jr., D.D.S, M.P.H. National Institute for Dental and Craniofacial Research National Institutes of Health Bethesda, Maryland

VICE-CHAIR

Jonathan E. Fielding, M.D., M.P.H., M.B.A. Los Angeles Department of Health Services Los Angeles, California

MEMBERS

Ross C. Brownson, Ph.D. St. Louis University School of Public Health St. Louis, Missouri

Patricia A. Buffler, Ph.D., M.P.H. School of Public Health University of California, Berkeley Berkeley, California

Mary Jane England, M.D. Washington Business Group on Health Washington, DC

David W. Fleming, M.D.* Oregon Health Division Department of Human Resources Portland, Oregon

Mindy Thompson Fullilove, M.D. New York State Psychiatric Institute and Columbia University New York, New York

Fernando A. Guerra, M.D., M.P.H. San Antonio Metropolitan Health District San Antonio, Texas

Alan R. Hinman, M.D., M.P.H. Task Force for Child Survival and Development Atlanta, Georgia George J. Isham, M.D. Health Partners Minneapolis, Minnesota

Garland H. Land, M.P.H.
Center for Health Information Management
and Epidemiology
Missouri Department of Health
Jefferson City, Missouri

Charles S. Mahan, M.D. College of Public Health University of South Florida Tampa, Florida

Patricia Dolan Mullen, Dr.P.H. University of Texas-Houston School of Public Health Houston, Texas

Susan C. Scrimshaw, Ph.D. School of Public Health University of Illinois Chicago, Illinois

Robert S. Thompson, M.D. Department of Preventive Care Group Health Cooperative of Puget Sound Seattle, Washington

^{*}As of June 2000, Dr. Fleming is with CDC in Atlanta, Georgia, and no longer serves on the Task Force.

The following CDC staff members prepared this report:

David P. Hopkins, M.D., M.P.H.
Peter A. Briss, M.D.
Jeffrey R. Harris, M.D., M.P.H.
Connie J. Ricard, M.P.H.
J. Niels Rosenquist
Kate W. Harris
Division of Prevention Research and Analytic Methods
Epidemiology Program Office

Corinne G. Husten, M.D., M.P.H.
Jeffrey W. McKenna, M.S.
Donald J. Sharp, M.D., D.T.M.&H.
Trevor A. Woollery, Ph.D.
Namita Sharma, M.A., M.P.A.
Terry F. Pechacek, Ph.D.
Office on Smoking and Health
National Center for Chronic Disease Prevention and Health

in collaboration with

Jonathan E. Fielding, M.D., M.P.H., M.B.A.

Task Force on Community Preventive Services

Los Angeles Department of Health Services

University of California, Los Angeles School of Public Health

University of California, Los Angeles School of Medicine

Strategies for Reducing Exposure to Environmental Tobacco Smoke, Increasing Tobacco-Use Cessation, and Reducing Initiation in Communities and Health-Care Systems

A Report on Recommendations of the Task Force on Community Preventive Services

Summary

Reducing tobacco-related morbidity and death is an ongoing challenge for health-care providers, health-care systems, and public health programs. Interventions are available that a) reduce exposure to environmental tobacco smoke, b) reduce tobacco-use initiation,* and c) increase tobacco-use cessation.† The Task Force on Community Preventive Services has conducted systematic reviews on 14 selected interventions, which are appropriate for communities and health-care systems, and has made recommendations regarding use of these interventions. This report summarizes the recommendations, identifies sources that offer full reviews of the interventions and details about applying the interventions locally, and provides an update of the Task Force's work.

BACKGROUND

In the United States, tobacco use is the leading cause of preventable death (1–3), and exposure to environmental tobacco smoke (ETS) is a preventable cause of significant morbidity and death among nonsmokers (4–6). Reducing tobacco use and reducing exposure to environmental tobacco smoke are essential community and public health objectives (7). As part of the *Healthy People 2010* initiative (7), goals have been developed to reduce tobacco-related morbidity and death by reducing exposure to ETS, decreasing tobacco-use initiation, and increasing tobacco-use cessation (Table 1).

By implementing interventions shown to be effective, policy makers and health-care and public health providers can help their communities achieve these goals while using community resources efficiently. This report and other related publications provide guidance from the Task Force on Community Preventive Services to personnel in state and local health departments, managed care organizations, purchasers of health care, persons responsible for funding public health programs, and others who have interest in or responsibility for decreasing tobacco use and reducing exposure to environmental tobacco smoke in all segments of the population.

^{*}Tobacco-use initiation is defined as the onset, development, and establishment of tobaccouse behavior.

[†] Tobacco-use cessation is defined as a process that begins with the decision to stop using tobacco and ends with long-term maintenance of abstinence from tobacco.

TABLE 1. Selected objectives for reducing tobacco use and exposure to environmental tobacco smoke — *Healthy People 2010*

Targeted condition	Population	Percentage of population	
_	-	Baseline*	2010 objective
Cigarette smoking	Adults	24% (1997)	Decrease to 12%.
Tobacco use (past month)	Adolescents (grades 9–12)	43% (1997)	Decrease to 21%.
Smoking cessation	Pregnant women	12% (1991)	Increase to 30%.
Smoking cessation attempts	Adult smokers	43% (1997)	Increase to 75%.
Smoking cessation attempts	Adolescent smokers	73% (1997)	Increase to 84%.
Exposure to environmental tobacco smoke	Nonsmokers	65% (1994)	Decrease to 45%.
Exposure to environmental tobacco smoke at home	Children	27% (1994)	Decrease to 10%.

^{*} Years indicate when the data were analyzed to establish baseline estimates. Some estimates are age-adjusted to the year 2000 standard population.

Source: US Department of Health and Human Services. Healthy people 2010 (conference ed, in 2 vols). Washington, DC: US Department of Health and Human Services, 2000.

INTRODUCTION

The independent, nonfederal Task Force on Community Preventive Services (the Task Force) is developing the *Guide to Community Preventive Services* (the *Community Guide*) with the support of the U.S. Department of Health and Human Services and in collaboration with public and private partners. CDC and other federal agencies provide staff support to the Task Force for development of the *Community Guide*. However, the recommendations presented in this report were developed by the Task Force and are not necessarily the recommendations of CDC or the U.S. Department of Health and Human Services.

This *MMWR* report is the second to be completed for the *Community Guide*, a resource that will include multiple chapters, each focusing on a preventive health topic. The first chapter was on vaccine-preventable diseases (8–11), and the information in this report will be part of a second chapter, on tobacco use. This report provides an overview of the process used by the Task Force to select and review evidence; it summarizes the Task Force's recommendations on community interventions to reduce exposure to ETS and tobacco use. A full presentation of the recommendations, supporting evidence, and remaining research questions will be published in the *American Journal of Preventive Medicine* in 2001.

For more information about this report, please call the Office on Smoking and Health (OSH) press line at 770-488-5493. Copies of this report may be obtained through OSH's Web site at http://www.cdc.gov/tobacco or by calling 770-488-5705 (press 3 to talk to an information specialist).

METHODS

Methods used to conduct systematic reviews and link evidence to recommendations have been described elsewhere (12). In brief, for each *Community Guide* chapter, multidisciplinary chapter development teams conduct reviews by

- developing an approach to organizing, grouping, and selecting the interventions for review;
- systematically searching for and retrieving evidence;
- assessing the quality of the body of evidence of effectiveness for interventions and summarizing the strength of this body of evidence;
- summarizing information regarding other evidence (e.g., applicability of the intervention to different populations and settings, additional benefits, potential harms, barriers to implementation, and economic evaluations); and
- identifying and summarizing research gaps.

For the chapter on tobacco use, the chapter development team focused on interventions to decrease exposure to ETS, reduce tobacco-use initiation, and increase tobacco-use cessation. The chapter consultation team members* generated a comprehensive list of strategies and created a priority list of interventions for review based on their perception of the importance and the extent to which the interventions were practiced in the United States. Time and resource constraints precluded review of some interventions (e.g., communitywide risk factor screening and counseling).

Interventions reviewed were either single-component (i.e., using only one activity to achieve desired outcomes) or multicomponent (i.e., using more than one related activity). Interventions were grouped together on the basis of their similarity. Some studies provided evidence for more than one intervention. In these cases, the studies were reviewed for each applicable intervention. The classifications or nomenclature used in this report were chosen to ensure comparability in the review process, and these classifications sometimes differ from those used in the original studies.

To be included in the reviews of effectiveness, studies had to meet these criteria: a) they were limited to primary investigations of interventions selected for evaluation; b) they were published in English from January 1980 through May 2000; c) they were conducted in industrialized countries; and d) they compared outcomes in groups of persons exposed to the intervention with outcomes in groups of persons not exposed or less exposed to the intervention (whether the comparison was concurrent or before-after).

For each intervention reviewed, the team developed an analytic framework indicating possible causal links between the intervention under study and predefined outcomes of interest. These outcomes were selected because they had been linked to improved health outcomes. For example, the Task Force concluded the following:

^{*}Consultants for the chapter on preventing tobacco use and exposure were Dileep G. Bal, M.D., California Department of Health Services, Sacramento, California; Anthony Biglan, Ph.D., Oregon Research Institute, Eugene, Oregon; Patricia A. Buffler, Ph.D., M.P.H., University of California, Berkeley, California; Gregory Connolly, D.M.D., M.P.H., Massachusetts Tobacco Control Program, Boston, Massachusetts; K. Michael Cummings, Ph.D., M.P.H., Roswell Park Institute, Buffalo, New York; Michael C. Fiore, M.D., M.P.H., University of Wisconsin Medical School, Madison, Wisconsin; David W. Fleming, M.D., CDC, Atlanta, Georgia; Sally Malek, M.P.H., North Carolina Department of Health, Raleigh, North Carolina; Patricia A, Mullen, Dr.P.H., University of Texas Health Sciences Center, Houston, Texas; Cheryl L. Perry, Ph.D., University of Minnesota, Minneapolis, Minnesota; John P. Pierce, Ph.D., University of California, San Diego, California; Helen H. Schauffler, Ph.D., University of California, Berkeley, California; Randy H. Schwartz, M.S.P.H., Maine Bureau of Health, Augusta, Maine; and Mitchell Zeller, American Legacy Foundation, Washington, DC.

- Tobacco use is a cause of morbidity (illness and disability) and death (2,3,13).
- Tobacco-use cessation reduces tobacco-related morbidity and death (2,14).
- Delivery of advice by health-care providers to tobacco-using patients to quit has a small but significant impact on tobacco-use cessation among patients (15,16).
- The younger persons are when they begin to smoke, the more likely they are to be current smokers as adults an indication that postponing or preventing tobacco use among children and adolescents will decrease the number of adult tobacco users (17).
- Exposure to ETS is a cause of morbidity and death (4–6), and reducing exposure to ETS can be assumed to reduce ETS-associated morbidity and death.

The evaluations of interventions in this report, therefore, focus on evidence of effectiveness in reducing ETS exposure, reducing tobacco-use initiation, and increasing tobacco-use cessation (including increasing patient receipt of advice to quit from health-care providers).

Each study that met the inclusion criteria was evaluated by using a standardized abstraction form and was assessed for suitability of the study design and threats to validity. On the basis of the number of threats to validity, studies were characterized as having good, fair, or limited execution (12). The strength of the body of evidence of effectiveness was characterized as strong, sufficient, or insufficient on the basis of the number of available studies, the suitability of study designs for evaluating effectiveness, the quality of execution of the studies, the consistency of the results, and the effect size (12).

The Community Guide links evidence to recommendations systematically (12). The strength of evidence of effectiveness corresponds directly to the strength of recommendations (e.g., strong evidence of effectiveness corresponds to an intervention being strongly recommended, and sufficient evidence corresponds to an intervention being recommended). Other types of evidence also can affect a recommendation. For example, evidence of harms resulting from an intervention might lead to a recommendation that the intervention not be used, even if it is effective in improving some outcomes. In general, the Task Force does not use economic information to modify recommendations.

A finding of insufficient evidence of effectiveness does not result in recommendations regarding an intervention's use but is important for identifying areas of uncertainty and continuing research needs. In contrast, adequate evidence of ineffectiveness leads to a recommendation that the intervention not be used.

RESULTS

The systematic search identified 243 studies on tobacco interventions that met the inclusion criteria. Of these 243 studies, 77 were excluded on the basis of limitations in their execution or design and were not considered further. The remaining 166 studies were considered qualifying studies.* The 14 Task Force evaluations in this report are based on these qualifying studies, all of which had good or fair execution.

^{*}Additional information on the qualifying studies will be available at http://www.thecommunityguide.org.

On the basis of the evidence of effectiveness, the Task Force either strongly recommended or recommended nine of the 14 strategies evaluated (Table 2). These nine recommendations include one intervention to reduce exposure to ETS (smoking bans and restrictions), two interventions to reduce tobacco-use initiation (increasing the unit price for tobacco products and multicomponent mass media campaigns), and six interventions to increase cessation (increasing the unit price for tobacco products; multicomponent mass media campaigns; provider reminder systems; a combined provider reminder plus provider education with or without patient education program; multicomponent interventions including telephone support for persons who want to stop using tobacco; and reducing patient out-of-pocket costs for effective cessation therapies). In addition to the 14 completed evaluations, reviews for three more tobacco prevention interventions — youth access restrictions, school-based education, and tobacco industry and product restrictions — are still under way and will be included in the finished chapter.

USE OF THE RECOMMENDATIONS IN COMMUNITIES AND HEALTH-CARE SYSTEMS

Given that tobacco use is the largest preventable cause of death in the United States, reducing tobacco use and ETS exposure should be relevant to most communities. In selecting and implementing interventions, communities should strive to develop a comprehensive strategy to reduce exposure to ETS, reduce initiation, and increase cessation. Improvements in each category will contribute to reductions in tobacco-related morbidity and death, and success in one area might contribute to improvements in the other areas as well. Increasing tobacco-use cessation, for example, will reduce exposure to ETS. Smoking bans, effective in reducing exposure to ETS, also can reduce daily tobacco consumption for some tobacco users and help others quit entirely.

Choosing interventions that work in general and that are well-matched to local needs and capabilities and then implementing those interventions well are vital steps for reducing tobacco use and ETS exposure. In setting priorities for the selection of interventions to meet local objectives, recommendations and other evidence provided in the *Community Guide* should be considered along with such local information as resource availability, administrative structures, and economic, social, and regulatory environments of organizations and practitioners. Information regarding applicability can be used to assess the extent to which the intervention might be useful in a particular setting or population. Though limited, economic information — to be provided in the full report in 2001 — might be useful in identifying a) resource requirements for interventions, and b) interventions that meet public health goals more efficiently than other available options. If local goals and resources permit, the use of *strongly recommended* and *recommended* interventions should be initiated or increased.

A starting point for communities and health-care systems is to assess current tobacco-use prevention and cessation activities. Current efforts should be compared with recommendations in this report as well as other relevant program recommendations proposed by CDC (18), the National Cancer Institute (19), the Public Health Service (16), the U.S. Department of Health and Human Services (17,20,21), and the Institute of Medicine (22). In addition to assessing overall progress toward meeting goals and the current status of tobacco control efforts, health planners should also consider how to eliminate health disparities related to tobacco use and ETS exposure.

TABLE 2. Recommendations regarding selected interventions to reduce exposure to environmental tobacco smoke and to reduce tobacco use — Task Force on Community Preventive Services, 2000

Intervention (no. of qualifying studies)	Task Force recommendation regarding use	Intervention description	Key findings
Strategies to reduce expos	ure to environmental tobacco	o smoke (ETS)	
Smoking bans and restrictions (n=10)	Strongly recommended	Bans or limits tobacco smoking in workplaces and public areas (policies, regulations, and laws).	Effective in reducing workplace exposure to ETS in several different settings and populations.
			Eight studies documented decreases in daily tobacco consumption among continuing users.
			Three studies documented increased rates of tobacco-use cessation following implementation of smoking bans.
Community education to reduce home ETS exposure (n=1)	Insufficient evidence*	Provides information to persons about reducing ETS exposure in the home.	Insufficient number of studies evaluating the impact of education efforts on reducing ETS exposure in the home environment.
Strategies to reduce tobacc	o-use initiation		
Increasing the unit price of tobacco products (n=8)	Strongly recommended	Increases the excise tax on cigarettes (government legislation).	Effective in reducing both initiation and consumption of tobacco by adolescents.
			Three studies documented an effect on consumption and use in young adults (18-25 years).
Mass media education to reduce tobacco-use initiation — campaigns (n=12)	Strongly recommended	Informs viewers through long-term, high-intensity counteradvertising campaigns.	Effective in combination with other interventions such as tobacco product price increases, school-based education, or community education in reducing tobacco use by adolescents.
			Most qualifying studies measured outcomes in student populations.

	-		
ncreasing the unit price of tobacco products (n=17)	Strongly recommended	Increases the excise tax on cigarettes (government legislation).	Effective with or without other interventions such as mass media campaigns.
			Effective in reducing population consumption of tobacco.
			Effective in increasing cessation in several populations.
Mass media education to increase tobacco-use	Strongly recommended	ded Informs viewers through long-term, high-intensity counteradvertising campaigns.	Effective as part of a multicomponent program in reducing population consumption of tobacco.
(n=15)	ation — campaigns 5)		Strongest evaluations of effectiveness measured the impact of multicomponent state tobacco control programs (California, Oregon, Massachusetts), which included an excise tax increase, and school and community education programs.
			Effective in increasing cessation in several populations.
ass media education increase tobacco-use		Recruits and motivates tobacco users to quit during the course of a short-term broadcast cessation series.	Insufficient evidence of effectiveness in increasing cessation.
cessation — series (n=9)			Few studies provided adequate comparison groups.
Mass media education to increase tobacco-use cessation — contests (n=1)	Insufficient evidence*	Recruits and motivates tobacco users to participate in a targeted cessation date.	Insufficient evidence of effectiveness in increasing cessation in the community.
		Uses short-term mass media messages to promote contest and to recruit participants.	Few studies provided adequate comparison groups.

^{*}A determination that evidence is insufficient should not be seen as evidence of ineffectiveness. A determination of insufficient evidence assists in identifying a) areas of uncertainty regarding effectiveness of an intervention and b) continuing research needs. In contrast, evidence of ineffectiveness leads to a recommendation that the intervention not be used.

TABLE 2. (*Continued*) Recommendations regarding selected interventions to reduce exposure to environmental tobacco smoke and to reduce tobacco use — Task Force on Community Preventive Services, 2000

Intervention (no. of qualifying studies)	Task Force recommendation regarding use	Intervention description	Key findings
Strategies to increase tobacc	co-use cessation, appropriat	te for health-care systems	
Multicomponent tobacco-use cessation interventions that include	Strongly recommended	Provides information and motivation to tobacco product users via telephone contact.	Effective as part of a multicomponent intervention in both clinical and community settings.
telephone support (n=32)		Proactive telephone support includes provider-maintained contact.	The minimum effective combination: proactive telephone support <i>plus</i> patient education materials.
		Reactive telephone support requires patient-initiated contact.	Mass media efforts were effective in increasing use of telephone cessation education and support services.
Multicomponent program including — Provider	Strongly recommended	Educates and prompts health-care providers to identify, advise, and assist tobacco-using patients in cessation efforts.	The combination most frequently evaluated in the qualifying studies.
reminder system <i>plus</i> provider education program <i>with or without</i> patient education [†] (n=31)			Effective in increasing both patient receipt of provider advice to quit and patient tobacco-use cessation.
			Effective in several different clinical settings and patient populations.
Provider reminder systems (n=7)	Recommended	Informs or prompts providers to determine patient's tobacco-use status and/or deliver brief advice to quit.	Effective in increasing patient receipt of provide advice to quit.
			Effective when applied in individual practice settings and in health-care systems.
Reducing patient out-of- pocket costs for effective	Recommended	Reduces or eliminates patient copayments for effective cessation therapies.	Effective in increasing patient use of the cessation therapy (pharmacologic therapy with or without behavioral program) and in increasing the total number of patients who quit.
Provider education only (n=16)	Insufficient evidence*	Provides information to health-care providers on the importance of cessation for tobacco-using patients.	Insufficient evidence of effectiveness for provider education interventions alone.
		ioi tobacco-using patients.	Inconsistent evidence of effect on increasing patient receipt of provider advice to quit.

Provider feedback (n=3)	Insufficient evidence*	Provides retrospective assessment of provider performance in delivery of tobacco cessation advice or assistance to patients.	Insufficient number of studies providing measurements of changes in provider delivery of advice or patient tobacco-use cessation. The three qualifying studies evaluated the effect of feedback on provider documentation of smoking status.
Youth access restrictions	Pending	Regulates and enforces bans on the purchase or consumption of tobacco products by children and adolescents (laws).	Pending
School-based education	Pending	Provides information and motivation to children and adolescents to diminish the uptake of tobacco product use.	Pending
Tobacco industry restrictions	Pending	Regulates to bacco product content, labeling, or industry promotion and advertising (laws).	Pending

^{*}A determination that evidence is insufficient should not be seen as evidence of ineffectiveness. A determination of insufficient evidence assists in identifying a) areas of uncertainty regarding effectiveness of an intervention and b) continuing research needs. In contrast, evidence of ineffectiveness leads to a recommendation that the intervention not be used.

[†] The chapter development team did not evaluate evidence of effectiveness of specific tobacco cessation programs (individual or group), pharmacologic therapies, or provider interactions with patients (e.g., advice or counseling). These interventions were considered to be outside of the chapter focus. The recently updated Public Health Service cessation guidelines provide an evidence-based review of these interventions (Fiore MC, Bailey WC, Cohen SJ, et al. Treating tobacco use and dependence. Clinical practice guideline. Rockville, MD: US Department of Health and Human Services, Public Health Service, 2000). Because the cessation guidelines also provide an evaluation of patient education interventions, including supplementary education materials, the team did not evaluate evidence of the effectiveness of patient education when implemented with or without provider advice or counseling.

The identification and assessment of existing disparities are critical in selecting and implementing interventions to assist populations at high risk, such as low-socioeconomic populations and some racial/ethnic groups (14,18,20).

This review did not examine the evidence of effectiveness of clinical cessation programs or therapies for tobacco dependence, which are not part of the *Community Guide* mandate but were addressed in an extensive, evidence-based review recently updated by the Public Health Service (16). However, evidence reviews conducted for the *Community Guide* include several interventions that might be useful to health-care providers and systems in identifying, advising, and assisting tobacco-using patients in their efforts to quit. Recommendations in the *Community Guide* complement those provided in the Public Health Service report (16), and both publications present a range of effective options for increasing and improving programs to help patients quit using tobacco.

ADDITIONAL INFORMATION ABOUT THE COMMUNITY GUIDE

During 2000–2001, *Community Guide* chapters will be prepared and released as each is completed. Upcoming chapters will focus on such topics as motor vehicle occupant injury, oral health, sexual behavior, physical activity, cancer, and the sociocultural environment. A compilation of the chapters will be published in book form. Additional information regarding the Task Force and the *Community Guide* is available on the Internet at http://www.thecommunityguide.org.

References

- 1. McGinnis JM, Foege WH. Actual causes of death in the United States. JAMA 1993;270:2207–12.
- US Department of Heath and Human Services. Reducing the health consequences of smoking: 25 years of progress. A report of the Surgeon General. Rockville, MD: US Department of Heath and Human Services, Public Health Service, CDC, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1989; DHHS publication no. (CDC) 89-8411.
- 3. National Cancer Institute, Smoking and Tobacco Control Program. Changes in cigarette-related disease risks and their implication for prevention and control. Bethesda, MD: National Institutes of Health, National Cancer Institute, 1997; Smoking and Tobacco Control Monograph 8.
- 4. US Department of Health and Human Services. The health consequences of involuntary smoking. A report of the Surgeon General. Rockville, MD: US Department of Heath and Human Services, Public Health Service, CDC, Center for Health Promotion and Education, Office on Smoking and Health, 1986; DHHS publication no. (CDC) 87-8398.
- US Environmental Protection Agency. Respiratory health effects of passive smoking: lung cancer and other disorders. Washington, DC: US Environmental Protection Agency, Office of Research and Development, Office of Air and Radiation, 1992; Publication no. EPA/600/6-90/006F.
- 6. California Environmental Protection Agency. Health effects of exposure to environmental tobacco smoke final report and appendices. Sacramento, CA: California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, 1997.
- 7. US Department of Health and Human Services. Healthy people 2010 (conference ed, in 2 vols). Washington, DC: US Department of Health and Human Services, 2000.
- 8. CDC. Vaccine-preventable diseases: improving vaccination coverage in children, adolescents, and adults. A report on recommendations of the Task Force on Community Preventive Services. MMWR 1999;48(No. RR-8):1–15.
- 9. Task Force on Community Preventive Services. Recommendations regarding interventions to improve vaccination coverage in children, adolescents, and adults. Am J Prev Med 2000;18(suppl 1):92–96.

- Briss PA, Rodewald LE, Hinman AR, et al. Reviews of evidence regarding interventions to improve vaccination coverage in children, adolescents, and adults. Am J Prev Med 2000;18(suppl 1):97–140.
- 11. Shefer A, Briss P, Rodewald L, et al. Improving immunization coverage rates: an evidence-based review of the literature. Epidemiol Rev 1999;21:96–142.
- 12. Briss PA, Zaza S, Pappaioanou M, et al. Developing an evidence-based guide to community preventive services methods. Am J Prev Med 2000;18(suppl 1):35–43.
- 13. US Department of Health, Education, and Welfare. Smoking and health. A report of the Surgeon General. Washington, DC: US Department of Health, Education, and Welfare, Public Health Service, Office of the Assistant Secretary for Health, Office on Smoking and Health, 1979; DHEW publication no. (PHS) 79-50066.
- 14. US Department of Heath and Human Services. The health benefits of smoking cessation. A report of the Surgeon General. Rockville, MD: US Department of Heath and Human Services, Public Health Service, CDC, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1990; DHHS publication no. (CDC) 90-8416.
- National Institutes of Health. Tobacco and the clinician: interventions for medical and dental practice. Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health, 1994; Smoking and Tobacco Control Monograph 5; NIH publication no. 94-3693.
- Fiore MC, Bailey WC, Cohen SJ, et al. Treating tobacco use and dependence. Clinical practice guideline. Rockville, MD: US Department of Health and Human Services, Public Health Service, 2000. Available at http://www.surgeongeneral.gov/tobacco. Accessed July 13, 2000.
- 17. US Department of Health and Human Services. Preventing tobacco use among young people. A report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994.
- CDC. Best practices for comprehensive tobacco control programs August 1999. Atlanta, GA: US Department of Health and Human Services, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1999.
- 19. US Department of Health and Human Services. Strategies to control tobacco use in the United States: a blueprint for public health action in the 1990's. Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute, 1991; Smoking and Tobacco Control Monograph 1; NIH publication no. 92-3316.
- 20. US Department of Health and Human Services. Tobacco use among US racial/ethnic minority groups African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics. A report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1998.
- 21. US Department of Health and Human Services. Reducing tobacco use. A report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2000.
- 22. Institute of Medicine. Growing up tobacco free: preventing nicotine addiction in children and youths. Washington, DC: National Academy Press, 1994.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.
References to non-CDC sites on the Internet are provided as a service to MMWR
readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

MMWR

The Morbidity and Mortality Weekly Report (MMWR) Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to listserv@listserv.cdc.gov. The body content should read SUBscribe mmwr-toc. Electronic copy also is available from CDC's World-Wide Web server at http://www.cd.gov/mmwr/ or from CDC's file transfer protocol server at ftp://ftp.cdc.gov/pub/Publications/mmwr/. To subscribe for paper copy, contact Superintendent of documents, U.S. Government PrintingOffice, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333: telephone (888) 232-3228.

All material in the MMWR Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

☆U.S. Government Printing Office: 2001-633-173/48006 Region IV