# Youth Tobacco Cessation

## *A Guide for Making Informed Decisions*

2004

www.cdc.gov/tobacco

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION

**To order free copies of this publication, contact:**
Office on Smoking and Health
Publications, Mailstop K-50
4770 Buford Highway, NE
Atlanta, GA 30341-3717
770-488-5705 (press 3)

**This publication is available online at: http://www.cdc.gov/tobacco.**

**Suggested Citation**
Milton MH, Maule CO, Yee SL, Backinger C, Malarcher AM, Husten CG. *Youth Tobacco Cessation: A Guide for Making Informed Decisions.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2004.

Web site addresses of nonfederal organizations are provided solely as a service to our readers. Provision of an address does not constitute an endorsement of this organization by the Centers for Disease Control and Prevention (CDC) or the federal government, and none should be inferred. CDC is not responsible for the content of other organizations' Web pages.

# Youth Tobacco Cessation

## A Guide for Making Informed Decisions

Micah H. Milton, MPH

Catherine O. Maule

Sue Lin Yee, MA, MPH

Cathy Backinger, PhD

Ann M. Malarcher, PhD

Corinne G. Husten, MD, MPH

---

This guide was developed for the Youth Tobacco Cessation Collaborative

in close partnership with

# Preface

In 2000, the Youth Tobacco Cessation Collaborative (YTCC) published the *National Blueprint for Action: Youth and Young Adult Tobacco-Use Cessation* to guide discussion on how to help young tobacco users quit. This publication noted a lack of research showing what strategies and programs work for youth interventions and outlined goals for addressing this knowledge gap.

In response, the U.S. Centers for Disease Control and Prevention (CDC), the Canadian Tobacco Control Research Initiative (CTCRI), the U.S. National Cancer Institute (NCI), and the American Legacy Foundation (Legacy) worked to produce this publication, *Youth Tobacco Cessation: A Guide for Making Informed Decisions.* Representatives of these organizations assessed current efforts designed to help youth quit using tobacco and sought to identify "best practices."

The process began with a literature review of 66 published studies on youth tobacco-use cessation and reduction. An evidence review panel composed of experts in policy, practice, and research was then formed to systematically assess the quality of evidence from the existing studies. Panel members concluded that most of the studies lacked the quality or consistency of findings to allow conclusive recommendations about effective practices and that more evidence was needed to document the effectiveness of current interventions for youth tobacco-use cessation.

Unfortunately, guidance on how to help youth quit using tobacco is needed now. To address this need, a "better practices" model developed recently by CTCRI was employed. This model seeks to draw from both science and

experience to identify intervention approaches that are practical as well as effective. Because evidence was insufficient to create best practices, a special advisory panel was convened and charged with using the better practices model to develop practical guidelines on what issues should be considered when deciding whether and how to develop youth tobacco-use cessation programs. This panel was composed of people experienced in developing and delivering adolescent and young adult interventions. The result is *Youth Tobacco Cessation: A Guide for Making Informed Decisions*.

As research and programs on youth tobacco-use cessation continue, our knowledge and understanding of this area will grow, and our efforts should improve. We hope this publication will help influence and guide this growth.

# Contents

Preface . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . iii

List of Figures . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . vi

Acknowledgments . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . vii

Introduction . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1

CHAPTER 1
What You Should Know About Tobacco-Use Cessation . . . . . . . . . . . . . . . . . . . . . 3

CHAPTER 2
Getting Started: Assessing Whether to Implement
an Intervention and Developing a Plan . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 15

CHAPTER 3
Selecting a Cessation Intervention for Youth . . . . . . . . . . . . . . . . . . . . . . . . . . . . 27

CHAPTER 4
Understanding How to Best Serve
Your Youth Population . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 39

CHAPTER 5
Monitoring Your Progress:
Evaluating the Process and Outcomes . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 51

APPENDIX: RESOURCES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 61

## LIST OF FIGURES

FIGURE 1. Making Decisions to Help Youth Quit . . . . . . . . . . . . . . . . . . . . . . . . . . 2

FIGURE 2. Prevalence of Current Smoking Among High School Students, 2003. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 5

FIGURE 3. Assessing Community Needs and Your Organization's Capabilities . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 17

FIGURE 4. Key Elements of an Intervention Plan . . . . . . . . . . . . . . . . . . . . . . . . . 19

FIGURE 5. Common Methods for Delivering Tobacco-Use Cessation Interventions and How They Apply to Different Goals for Youth. . . . . . . . . . . . . 29

FIGURE 6. A Cognitive–Behavioral Model for Change . . . . . . . . . . . . . . . . . . . . . 33

FIGURE 7. Skills Training . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 35

FIGURE 8. Key Questions for Process Evaluations. . . . . . . . . . . . . . . . . . . . . . . . . 55

FIGURE 9. Key Questions for Outcome Evaluations . . . . . . . . . . . . . . . . . . . . . . . 57

# Acknowledgments

Many individuals and organizations contributed to this publication. The Evidence Review Panel examined numerous journal articles to develop evidence-based recommendations. The Special Advisory Panel developed practical guidelines for using these recommendations. Reviewers' comments enhanced our ability to communicate the recommendations and guidelines to the reader. This publication would not be possible without the outstanding administrative support provided by Dena Gregory and the editorial assistance provided by Amanda Crowell. We also want to thank Dr. Steve Sussman for updating his original 1999 literature review of youth tobacco-use cessation interventions and for his many contributions to the field of youth tobacco-use cessation.

## Major Contributors

**Heather Borski, MPH, CHES**
Utah Department of Health

**Julie Blackwell, MA, MPH**
CAMC Health Education and Research Institute

**J. Max Gilbert**
Northrop Grumman IT Health Solutions and Services

## Youth Cessation Advisory Group

**Ann Anderson, MD, MPH**
National Institute on Drug Abuse

**Cathy Backinger, PhD, MPH**
National Cancer Institute

**Allan Best, PhD**
Vancouver Hospital and Health Sciences Centre

**Heather Borski, MPH, CHES**
Utah Department of Health

**Suzanne Colby, PhD**
Brown University

**Debbie Coleman-Wallace, DrPh**
Preventive Healthcare Institute

**Brian Colwell, PhD**
Texas A&M University System Health Science Center

**Edward Ehlinger, MD, MSPH**
University of Minnesota

**Donna Grande, MGA**
American Medical Association

**Dawn Hachey**
Health Canada

**Lori Halls**
British Columbia Ministry of Health

**Thomas Houston, MD**
American Medical Association

**Corinne Husten, MD, MPH**
Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), Centers for Disease Control and Prevention (CDC)

**Chris Lovato, PhD**
University of British Columbia

**Eva Matthews, MPH**
National Cancer Institute

**Paul McDonald, PhD**
University of Waterloo

**Robin Mermelstein, PhD**
University of Illinois at Chicago

**Cheryl Moyer, MHS**
Canadian Tobacco Control Research Initiative

**C. Tracy Orleans, PhD**
The Robert Wood Johnson Foundation

**Patti Payne**
Canadian Cancer Society

**Karen Siener, MPH**
Office on Smoking and Health, NCCDPHP, CDC

**Steve Sussman, PhD**
University of Southern California

**Amber Hardy Thornton, MPH, CHES**
American Legacy Foundation

**Merv Ungurain, MPA, HAS**
Nova Scotia Department of Health

## Evidence Review Panel

**Ann Anderson, MD, MPH**
National Institute on Drug Abuse

**Cathy Backinger, PhD, MPH**
National Cancer Institute

**Suzanne Colby, PhD**
Brown University

**Debbie Coleman-Wallace, DrPh**
Preventive Healthcare Institute

**Brian Colwell, PhD**
Texas A&M University System Health Science Center

**Pebbles Fagan, PhD, MPH**
National Cancer Institute

**Lisa Gertrudes**
Brown University

**Corinne Husten, MD, MPH**
Office on Smoking and Health, NCCDPHP, CDC

**Catherine Maule**
Canadian Cancer Society, National Cancer Institute of Canada

**Paul McDonald, PhD**
University of Waterloo

**Micah Milton, MPH**
Office on Smoking and Health, NCCDPHP, CDC

**Debbie Ossip-Klein, PhD**
University of Rochester

## Special Advisory Panel

**Cathy Backinger, PhD, MPH**
National Cancer Institute

**Brian Colwell, PhD**
Texas A&M University System Health Science Center

**Sue Curry, PhD**
University of Illinois at Chicago

**Josie d'Avernas, MSc**
RBJ Health Management Associates

**Edward Ehlinger, MD, MSPH**
University of Minnesota

**Carmelle Goldberg, MSC**
Direction de la Sante Publique de Montreal

**David Hopkins, MD, MPH**
Epidemiology Program Office, CDC

**Connie Kohler, DrPH**
University of Alabama at Birmingham

**Chris Lovato, PhD**
University of British Columbia

**Robin Mermelstein, PhD**
University of Illinois at Chicago

**Amber Hardy Thornton, MPH, CHES**
American Legacy Foundation

**Sue Lin Yee, MA, MPH**
Office on Smoking and Health, NCCDPHP, CDC

## Reviewers

**Wendy Bjornson, MPH**
Pacific Center on Health and Tobacco

**Heather Borski, MPH, CHES**
Utah Department of Health

**Suzanne Colby, PhD**
Brown University

**Brian Colwell, PhD**
Texas A&M University System
Health Science Center

**Tim Connolly, RN, MN**
University of Arizona
Health Sciences Center

**Linda Crossett, RDH**
Division of Adolescent and School
Health, NCCDPHP, CDC

**Sue Curry, PhD**
University of Illinois at Chicago

**Josie d'Avernas, MSc**
RBJ Health Management Associates

**Bryan Dreilich**
British Columbia Ministry
of Health Planning

**Edward Ehlinger, MD, MSPH**
University of Minnesota

**Pebbles Fagan, PhD, MPH**
National Cancer Institute

**Carmelle Goldberg, MSC**
Direction de la Sante Publique
de Montreal

**Donna Grande, MGA**
American Medical Association

**Dawn Hachey**
Health Canada

**Samantha Harrykissoon, MPH**
Division of Adolescent and School
Health, NCCDPHP, CDC

**David Hopkins, MD, MPH**
Epidemiology Program Office, CDC

**Thomas Houston, MD**
American Medical Association

**Amber Jaworsky, MS**
Tulsa City-County Health Department

**Connie Kohler, DrPH**
University of Alabama at Birmingham

**Vicki Lentz**
Tulsa City-County Health Department

**Robert Leischow, MPH**
Arizona Department of Health Services

**Johanna Lewis-Esquerre, PhD**
Brown University

**Chris Lovato, PhD**
University of British Columbia

**Catherine Maule**
Canadian Cancer Society, National
Cancer Institute of Canada

**Paul McDonald, PhD**
University of Waterloo

**Cheryl Moyer, MA**
Canadian Tobacco Control
Research Initiative

**Deborah Ossip-Klein, PhD**
University of Rochester

**Patti Payne**
Canadian Cancer Society

**Jane Pritzel**
Division of Adolescent and School
Health, NCCDPHP, CDC

**Sarah Rosenberg, JD**
Oregon Department of Human Services,
Health Services

**Karen Siener, MPH**
Office on Smoking and Health,
NCCDPHP, CDC

**Steve Sussman, PhD**
University of Southern California

**Scott Thomas, PhD**
Bay Area Community Resources

**Amber Hardy Thornton, MPH, CHES**
American Legacy Foundation

**Laurie Woodland**
British Columbia Ministry
of Health Planning

## Special Thanks

**Dena Gregory, MPH**
Northrop Grumman IT Health Solutions and Services

**Amanda Crowell**
NCCDPHP, CDC

**Steve Sussman, PhD**
University of Southern California

# Introduction

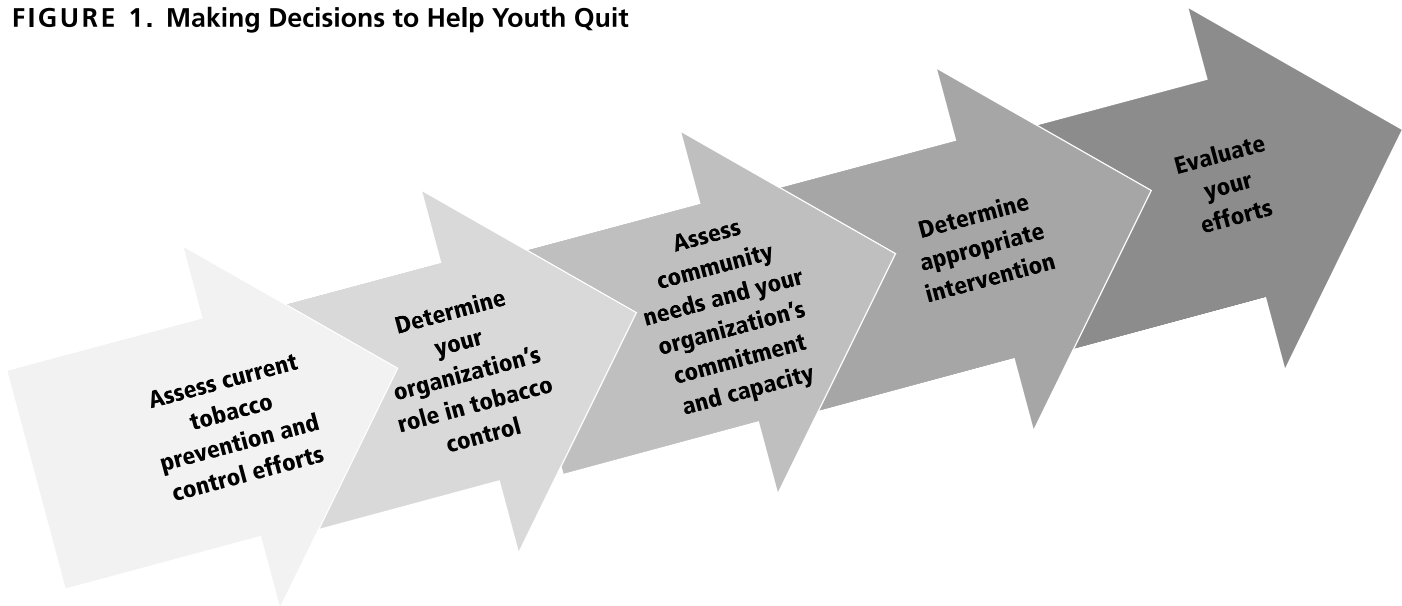
**Distinguishing Between an Intervention and a Program**
Throughout this guide, we distinguish between an *intervention* and a *program.* An *intervention* is a specific policy, service, or activity intended to change behavior or the environment. A *program* can mean a comprehensive effort that involves multiple components or the organization responsible for these efforts (e.g., a tobacco control program).

*Youth Tobacco Cessation: A Guide for Making Informed Decisions* is intended to help you decide whether to undertake youth tobacco-use cessation as a specific tobacco control activity. This publication covers topics such as the quality of the evidence base for youth interventions, the importance of conducting a needs assessment for the population your organization serves, and the need to evaluate your chosen intervention.

The demand for effective youth tobacco-use cessation interventions is growing. Like all public health programs, such interventions must be based on evidence that proves they work. Unfortunately, rigorous scientific studies upon which to base recommendations are lacking for youth tobacco-use cessation. Thus, this guide does not endorse any specific interventions or provide instructions on how to develop or implement interventions. It outlines the elements of a comprehensive tobacco control program, discusses issues that should be considered when making decisions, presents the most promising types of interventions, and provides guidance on evaluation activities (see Figure 1).

Chapter 1 discusses the health consequences of tobacco use for youth (defined in this guide as those aged 12–19 years) and outlines national objectives for reducing youth tobacco use. It explains how the guidelines in this publication were developed and how lessons learned from adult interventions may or may not be applicable to youth interventions. Chapter 1 also highlights the importance of incorporating youth interventions into comprehensive tobacco control programs.

**FIGURE 1. Making Decisions to Help Youth Quit**




Chapter 2 outlines important issues that should be considered when deciding whether to establish a youth tobacco-use cessation intervention. It describes the tasks that should be undertaken as part of the planning process, such as conducting needs assessments, engaging stakeholders, and evaluating outcomes.

Chapter 3 presents information about different types of interventions, different methods of delivering interventions, and a potentially promising theoretical approach. It includes practical suggestions on how to choose an intervention.

Chapter 4 discusses differences among youth that may affect reasons for and patterns of tobacco use and cessation. It also suggests ways to address these differences in the context of an intervention.

Chapter 5 provides guidance for conducting process and outcome evaluations. Rigorous evaluations are strongly recommended for all youth tobacco-use cessation interventions because of the paucity of evidence of the effectiveness of current efforts.

At the end of each chapter, two examples show how one state health department and one rural county school system chose and implemented a youth tobacco-use cessation intervention. Each example mirrors the types of activities discussed in the corresponding chapter.

The appendix lists additional resources on youth tobacco-use cessation interventions and evaluation guidelines.

# 1

# What You Should Know About Tobacco-Use Cessation

This chapter will help you

- Understand how tobacco use adversely affects the health of youth.
- Identify national goals for reducing youth tobacco use.
- Recognize that current knowledge on how to help youth quit is limited.
- Identify recommendations for adult tobacco-use cessation that may be applicable to youth.
- Understand how youth tobacco-use cessation fits into a comprehensive tobacco control program.

More than 80% of adult tobacco users in the United States began using tobacco regularly before age 18.[1] The prevalence of tobacco use is now higher among teenagers and young adults than among other adult populations. However, the prevalence of quitting (i.e., the percentage of those who have ever smoked who are now former smokers) also is lower among these younger age groups. Studies indicate that most teenaged and young adult smokers want to quit and try to do so, but few succeed.[2,3] Many of these young smokers will eventually die from a smoking-related disease. Although many people are aware that adult smokers are more likely to have heart disease, cancer, and emphysema, many negative health consequences also occur among youth.

Examples of negative health consequences for youth who smoke[1,4] include the following:

- Smoking hurts young people's physical fitness in terms of both performance and endurance, including those trained in competitive running.
- Smoking can hamper the rate of lung growth and the level of maximum lung function among youth.
- The resting heart rates of young adult smokers are 2–3 beats per minute faster than those of nonsmokers.
- Regular smoking is responsible for cough and increased frequency and severity of respiratory illnesses.
- The younger a person starts smoking, the more likely he is to become strongly addicted to nicotine. Most young people who smoke regularly

Definitions of youth and young adults vary depending on the population examined in a particular study or intervention. For this publication, we define youth as those aged 12–19 years.

continue to smoke throughout adulthood, leading to long-term health consequences.

- Teenagers who smoke are 3 times more likely than nonsmokers to use alcohol, 8 times more likely to use marijuana, and 22 times more likely to use cocaine. Smoking is associated with several other risk behaviors, such as fighting and engaging in unprotected sex.
- High school seniors who are regular smokers and who began smoking by grade 9 are 2.4 times more likely than their nonsmoking peers to report poorer overall health; 2.4–2.7 times more likely to report cough with phlegm or blood, shortness of breath when not exercising, and wheezing or gasping; and 3.0 times more likely to have seen a doctor or other health professional for an emotional or psychological complaint.
- Smoking may be a marker for underlying mental health problems, such as depression, among adolescents.

## Youth Tobacco Use and Cessation

### THE PROGRESSION OF TOBACCO USE

The immediate impetus to experiment with tobacco is often social, prompted by friends, family members, or other role models who smoke. However, various other factors—some of which may make certain youth more susceptible to addiction and long-term use—contribute to initiation and progression toward regular tobacco use (see Chapter 4).

The process by which a person moves from experimenting with tobacco to becoming a regular user can include the following five stages[1,5]:

- The *preparatory stage,* when a person's knowledge, beliefs, and expectations about tobacco use are formed.
- The *initial/trying stage,* when a person tries the first few cigarettes.
- The *experimentation stage,* which is a period of repeat, irregular use that may occur only in specific situations over a variable time.
- *Regular tobacco use,* when a routine pattern of use has developed. For youth, this may mean using tobacco every weekend or at certain times of the day.
- *Nicotine addiction,* which is regular tobacco use, usually daily, with an internally regulated need for nicotine.

### TOBACCO PREVALENCE

Tobacco use is pervasive among youth across North America. In Canada, 22% of teenagers aged 15–19 reported in 2002 that they were current smokers, down from 28% in 1999.[6] In the United States, 21.9% of high school students reported in 2003 that they had smoked cigarettes in the previous month (see Figure 2).[7]

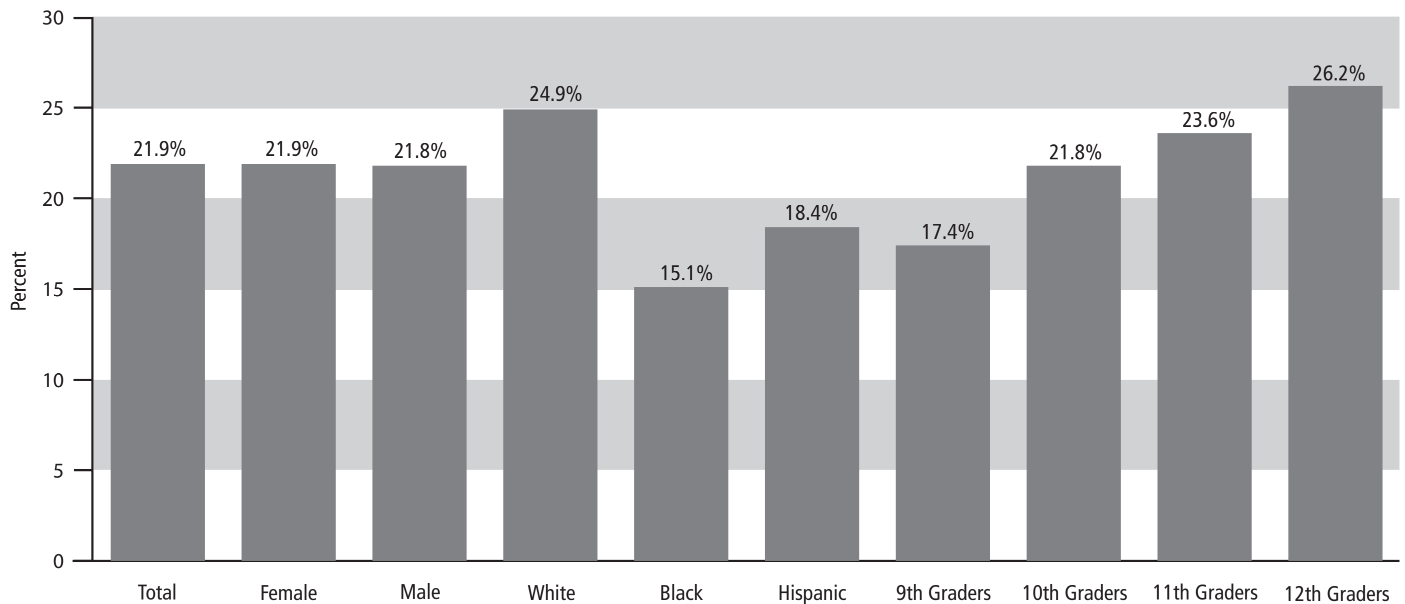
Tobacco use among U.S. youth declined slowly during the 1980s, increased rapidly during the early 1990s, and then declined significantly during 1997–2003.[7,8]

### NICOTINE DEPENDENCE

Nicotine is an addictive drug in tobacco that people are likely to begin using in adolescence. People who begin using tobacco at an early age are more likely to develop more severe levels of nicotine addiction than those who begin when they are older.[1] Like other drug addictions, nicotine dependence is a chronic condition with the potential for relapse throughout one's life. Typically, people become addicted to nicotine when they increase the frequency of tobacco use. However, dependence may begin very early for some people.[1,9]

Although most youth do not become nicotine dependent until after 2–3 years of use,[1] addiction can occur after smoking as few as 100 cigarettes.[10] Studies have shown that some young people report symptoms of dependence within the first weeks, even with very irregular or sporadic use.[5,9] Other studies have reported less evidence for nicotine addiction among youth, citing the irregular patterns of use and higher spontaneous quit rates as evidence that addiction is not common among this population.[11,12] Some adolescent tobacco users probably are dependent and may therefore suffer symptoms of physical and/or psychological withdrawal when attempting to quit.[1,6]

**FIGURE 2. Prevalence of Current Smoking Among High School Students, 2003***




* Smoked cigarettes at least once during the 30 days preceding the survey.

Source: Youth Risk Behavior Survey, 2003.

### YOUTH'S DESIRE TO QUIT AND QUIT ATTEMPTS

Many young people report a desire to quit and previous attempts at quitting. Of current smokers aged 15–19 in Canada, 64% reported one or more quit attempts in the 12 months before being surveyed.[6] In the United States, approximately 60% of current smokers in high school and middle school reported one or more quit attempts in the year before being surveyed.[13]

Although many youth think about and attempt to quit tobacco, many are unaware of or unable to access cessation services. Also, many youth do not think that quitting tobacco is difficult enough to warrant professional assistance, and they report not having much interest in participating in such interventions.[14] Others may not access interventions or services that do not appear to address their particular needs or concerns. For these reasons, recruitment strategies (see Chapter 2) should be a critical component of your intervention plan.

The immediate need for effective cessation support has been clearly expressed, both by youth and by people who work with them. In response, efforts have increased recently to improve our understanding of how to provide effective cessation interventions to youth. This demand was the primary motivation for developing this publication.

## National Goals for Reducing Youth Tobacco Use

*Healthy People 2010* established national targets for reducing tobacco use and increasing quit attempts by youth in the United States.[15] Specific objectives include the following:

- Reduce the use of tobacco products by youth in the past month from 40% to 21%.
- Reduce cigarette smoking by youth in the past month from 35% to 16%.
- Increase the proportion of regular smokers in grades 9–12 who have made a quit attempt from 61% to 84%.

The Centers for Disease Control and Prevention (CDC) recommends that one of the major goals of any tobacco control program should be to promote quitting among both young people and adults.[16] CDC also recommends that comprehensive school health programs should include efforts to help students and school staff members quit.[17]

## Guidelines for Youth Tobacco-Use Cessation

Recommendations for "best practices" typically are based on a review of data, usually from the scientific literature, on such topics as health care services or policies. The review is designed to show the effectiveness of specific practices. For example, the recommendations in the U.S. Public Health Service's (PHS's) *Treating Tobacco Use and Dependence: Clinical Practice Guideline,*[18] were developed

from an initial review of about 6,000 articles, of which 180 were deemed appropriate to the evidence base for making recommendations.

In the area of youth tobacco-use cessation, fewer than 80 studies had been published in scientific journals as of spring 2001. Variations in study aims and intervention content, format, focus, and context made comparisons among these studies difficult. Many studies had small sample sizes, used study designs that did not include comparison groups, or did not report enough information to describe the intervention.[3,19] These limitations reduced the ability to prove evidence of effectiveness. Thus, making recommendations from the published literature was not possible.

### THE "BETTER PRACTICES" MODEL

Despite the lack of evidence-based interventions, recommendations on how to help youth quit using tobacco are needed now. To address this need, a new approach developed by the Canadian Tobacco Control Research Initiative (CTCRI) was used to review the existing evidence and try to develop practical guidelines.[20] This "better practices" model is based on the idea that successful solutions to complex problems must draw from both science and experience. The resulting guidelines also take into account the specific needs of a given population and situation and the resources available to address those needs.

With this in mind, the special advisory panel that helped develop this publication outlined guidelines on what issues should be considered when developing youth tobacco-use cessation interventions. As the evidence base continues to expand, we should eventually be able to identify specific best practices for youth. In the meantime, the advice provided in this publication can guide you in deciding whether to implement a youth tobacco-use cessation intervention and in choosing and implementing appropriate interventions. All interventions must be monitored and rigorously evaluated (see Chapter 5) to advance knowledge in this area.

### APPLY YOUR EXPERIENCE

Another approach is to apply past experience working with youth in clinical practice, tobacco prevention activities, and interventions that address other risk behaviors or conditions. Information also can be drawn from the growing knowledge about what components of comprehensive tobacco control programs are most critical (e.g., prevention policies and interventions, second-hand smoke protections, cessation interventions, changes in public attitudes toward tobacco use).

One example of how these types of peripheral knowledge can support cessation efforts can be found in counter-marketing. Research suggests that youth are particularly susceptible to tobacco advertising and promotions.[5] If youth are

similarly influenced by counter-marketing, then learning about the strategies and tactics that the tobacco industry uses to target them may stimulate young smokers' interest in tobacco-use cessation and empower them to reject the tobacco industry's marketing efforts.

## Applying Adult Interventions to Youth

Because of the lack of best practices for youth tobacco-use cessation interventions, we should consider the efforts that have been effective in adult cessation and determine whether such practices could be effective, appropriate, and adaptable to meet the needs of young tobacco users wanting to quit. In 2000, the PHS published *Treating Tobacco Use and Dependence: Clinical Practice Guideline,* which provides evidence-based recommendations to increase the likelihood of successful tobacco-use cessation for adults who access health care systems.[18]

Although evidence was lacking on what works for adolescent patients, the PHS recommended the following clinician actions on the basis of expert opinion:

- Clinicians should screen pediatric and adolescent patients and their parents for tobacco use and provide a strong message regarding the importance of totally abstaining from tobacco use.
- Counseling and behavioral interventions shown to be effective with adults should be considered for use with children and adolescents. The content of these interventions should be modified to be developmentally appropriate.
- When treating adolescents, clinicians may consider prescriptions for bupropion sustained-release or nicotine replacement therapy when there is evidence of nicotine dependence and desire to quit tobacco use.
- Clinicians in a pediatric setting should offer tobacco-use cessation advice and interventions to parents to limit children's exposure to secondhand smoke.

Another approach is to apply the lessons learned about what works with adults as a starting point for youth tobacco-use cessation strategies.[18] The PHS clinical practice recommendations for adults indicate the following:

- Tobacco dependence is a chronic condition that often requires repeated intervention.
- If willing to quit, tobacco users should have access to effective treatments. If unwilling, tobacco users should be provided with brief interventions to increase their motivation to quit.
- A strong dose-response relationship exists between the intensity of tobacco-use cessation counseling and its effectiveness.
- Offering social support (both within and outside the treatment setting) and teaching problem-solving skills show promise for helping tobacco users quit.

- Pharmacotherapies are available and can be used in the absence of contraindications for people experiencing symptoms of nicotine withdrawal. However, youth are less likely to show signs of physical withdrawal than adults, and pharmacotherapies have not been shown to be effective among adolescents.

### A NOTE OF CAUTION

Intervention providers should use caution when adapting adult interventions for youth, and they should evaluate their efforts carefully. What works for one population may not work for another. What works in one setting (e.g., a health care visit) may not work in another (e.g., a school). For example, providers have learned from working with adults that providing social support through group counseling is an effective aid to cessation efforts.[18] However, people who work with youth on other sensitive issues, such as substance use and sexual behavior, know that privacy concerns can make group interventions inappropriate for this population. By understanding the needs and concerns of the youth you serve, you will be able to select the intervention components that best meet their needs.

The characteristics of youth and the context of their lives are unique and significantly contribute to their tobacco use and cessation behaviors. For example, youth typically have more variable patterns of tobacco use than adults. Many young people underestimate the addictiveness of tobacco and the effect of tobacco use on their health. In fact, the actual idea of “cessation” is often different for youth than it is for adults.

Youth who use tobacco may be reluctant to identify themselves as “smokers” or “tobacco users,” and subsequently, their commitments to “quitting” may be equally variable. For these reasons, we may not be able to draw conclusions about what works for youth tobacco-use cessation on the basis of what works for adults.

## A Comprehensive Approach to Tobacco Control

Overcoming tobacco dependence, like with any addiction, is not a single event. It is a complex and continuous process mitigated by an array of physical, social, and psychological factors. Many factors can prompt people to begin using tobacco, and many variables can prompt them to quit. A single intervention or activity is unlikely to be effective and suitable for every person in the population you serve.

For this reason, CDC recommends that all tobacco control programs be comprehensive.[16] Comprehensive programs can create the synergy and supportive environment needed to help youth quit. One organization is unlikely to be able to provide every component for a comprehensive program. However, different organizations can coordinate their efforts to achieve comprehensive programs in their communities.

A comprehensive tobacco control program should include the following components[16]:

- Tobacco-use prevention efforts that jointly involve education, community activities, and counter-marketing.
- Legislative and policy efforts to limit tobacco use, stop tobacco advertising and promotions, promote clean indoor air, restrict youth access to tobacco, and increase the cost of tobacco through taxation.
- Enforcement of existing laws and policies.
- Cessation interventions for both adults and youth.
- Interventions to prevent or reduce the burden of chronic diseases related to tobacco use.
- Surveillance and evaluation to improve knowledge about best practices in tobacco control.
- Tobacco control efforts that operate at multiple levels (i.e., state or province, community, and school).
- Administrative and managerial activities that coordinate tobacco control efforts at the community level and at state, province, or other larger jurisdiction levels.

### INCORPORATING YOUTH INTERVENTIONS INTO COMPREHENSIVE PROGRAMS

The decision about whether to implement a cessation intervention for youth is complicated and may be influenced by many factors. The impetus for developing such an intervention can come from different sources (e.g., the criminal justice system, state agencies, community groups, youth). Decisions should be made only after taking into account the services currently offered in your area, along with how your new services will be supported and integrated.

When considering whether to offer a cessation intervention for youth, first determine whether a comprehensive tobacco control program already exists in your area. If it does, assess how your intervention will enhance these efforts. If a comprehensive program does not exist, assess what tobacco interventions should be created or strengthened and what contribution your intervention can offer toward a more comprehensive approach (see Chapter 2).

### THE IMPORTANCE OF ENVIRONMENTAL FACTORS

Strong voluntary and regulatory policies that deter tobacco use and protect youth from secondhand smoke are critical to helping youth quit. Increases in taxes on tobacco, which raise the overall cost, significantly reduce tobacco use by youth.[21] Smoke-free policies in public places make tobacco use less socially acceptable, which also may help to prevent and reduce tobacco use by youth.

In communities where such measures are not in place, people interested in youth tobacco-use cessation should actively campaign for policy changes that can benefit all community members.

Counter-advertising also can play a significant role in reducing tobacco use by youth.[21,22] As noted previously, youth are very susceptible to the influence of tobacco industry advertisements. Mass media campaigns can counter that effect and help create an environment in which tobacco use is less acceptable, thereby increasing the motivation to quit. Even when counter-advertising is aimed at preventing tobacco use among youth, it may benefit youth tobacco-use cessation by increasing interest in quitting.

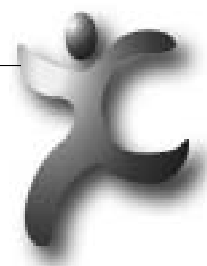
If cessation resources already exist for adults, they could be expanded to include interventions for youth.[18] A comprehensive tobacco control program that includes cessation interventions for both adults and youth and links them to existing cessation resources (e.g., quitlines) could be established.

Another important factor is the environment in which an intervention is delivered. For example, a school-based intervention may lose credibility if teachers are seen using tobacco on school grounds (whether inside or outside a building). To counter this effect, smoke-free school policies should be established and enforced, as recommended by CDC.[17]

## References

1. U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 1994.
2. George H. Gallup International Institute. *Teen-age Attitudes and Behaviors Concerning Tobacco: Report of Findings.* Princeton, NJ: George H. Gallup International Institute; 1992.
3. Sussman S. Effects of sixty six adolescent cessation use trials and seventeen prospective studies of self-initiated quitting. *Tobacco Induced Disease* 2002; 1(1):35–81.
4. Arday DR, Giovino GA, Schulman J, Nelson DE, Mowery P, Samet JM. Cigarette smoking and self-reported health problems among US high school seniors, 1982–1989. *American Journal of Health Promotion* 1995;10(2):111–116.
5. Lynch BS, Bonnie RJ, editors. *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths*. Washington, DC: National Academy Press; 1994.
6. Health Canada. Canadian Tobacco Use Monitoring Survey. Annual Results, 2002. Available at www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2002/ 2002_supptables_eng.pdf.
7. Centers for Disease Control and Prevention. Cigarette use among high school students—United States, 1991–2003. *Morbidity and Mortality Weekly Report* 2004;53(23):499–502.

8. Johnston LD, O'Malley PM, Bachman JG. *Monitoring the Future: National Results on Adolescent Drug Use. Overview of Key Findings, 2001*. Bethesda, MD: National Institute on Drug Abuse; 2002. NIH publication no. 02-5105.
9. DiFranza JR, Rigotti NA, McNeill AD, et al. Initial symptoms of nicotine dependence in adolescents. *Tobacco Control* 2000;9:313–319.
10. American Academy of Pediatrics Committee on Substance Abuse. Tobacco's toll: implications for the pediatrician. *Pediatrics* 2001;107(4):794–798.
11. Chassin L, Presson CC, Sherman SJ, Edwards DA. The natural history of cigarette smoking: predicting young-adult smoking outcomes from adolescent smoking patterns. *Health Psychology* 1990;9(6):701–716.
12. Shiffman S. Refining models of dependence: variations across persons and situations. *British Journal of Addiction* 1991;86(5):611–615.
13. Centers for Disease Control and Prevention. Youth tobacco surveillance—United States, 2000. *Morbidity and Mortality Weekly Report* 2001;50(SS-4):30.
14. Balch GI. Exploring perceptions of smoking cessation among high school smokers: input and feedback from focus groups. *Preventive Medicine* 1998;27(5 Pt 3):A55–A63.
15. U.S. Department of Health and Human Services. *Healthy People 2010*. Volume II. 2nd edition. Washington, DC: U.S. Government Printing Office; 2000:27-12, 27-21.
16. Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs*. Atlanta: U.S. Department of Health and Human Services; 1999.
17. Centers for Disease Control and Prevention. Guidelines for school health programs to prevent tobacco use and addiction. *Morbidity and Mortality Weekly Report* 1994;43(No. RR-2).
18. Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; 2000.
19. McDonald P, Colwell B, Backinger CL, Husten C, Maule CO. Better practices for youth tobacco cessation: evidence of review panel. *American Journal of Health Behavior* 2003;27(suppl 2):S144–S158.
20. Maule CO, Moyer CA, Lovato CY. Application of a better practices framework to review youth tobacco use cessation. *American Journal of Health Behavior* 2003; 27(suppl 2):S132–S143.
21. Hopkins DP, Briss PA, Richard CJ, et al. and the Task Force for Community Preventive Services. Reviews of evidence regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. *American Journal of Preventive Medicine* 2001;20(2 suppl):16–66.
22. Farrelly MC, Davis KC, Yarsevich JM. Getting to the truth: assessing youths' reaction to the truth[SM] and "Think. Don't Smoke" tobacco countermarketing campaigns. *Legacy First Look Report 9*. Washington, DC: American Legacy Foundation; 2002.



## EXAMPLE A-1
## How One State Developed a Tobacco Quitline for Youth

A health department in a western state established a Tobacco Prevention and Control Program (TPCP) in the mid-1980s to address the public health consequences of tobacco use. Before 1990, the state's youth tobacco-use cessation efforts consisted primarily of modified adult interventions available on a limited basis at the local level.

The impetus for developing the first cessation intervention designed specifically for youth came from the juvenile court system, where demand arose for a diversionary intervention for youth who had been cited for underage tobacco possession. The state developed a short series of classes designed to help youth understand the physical and legal consequences of tobacco use and develop skills to help them reduce the amount of tobacco they used. The intervention appeared to work well, but research data to prove its effectiveness were lacking.

An expanded version of the intervention was implemented in different settings, including schools and communities, and an evaluation was planned and implemented. The evaluation showed that the intervention was effective but was not reaching all youth who needed help to quit tobacco use. The intervention was offered only in the more densely populated areas of the state and with youth who already were involved to some extent in their school community or the criminal justice system. A large number of youth did not have access to the intervention.

In the spring of 2000, the TPCP received a large allocation of tobacco settlement funding and set aside money to implement an intervention that would reach more youth. With this new funding, officials were able to develop a statewide telephone quitline for youth.

Examples A and B show how one state health department and one rural county school system chose and implemented a youth tobacco-use cessation intervention.

EXAMPLE B-1

## A Rural County High School's Cessation Intervention

A school system in a county with a largely rural population had focused its tobacco control efforts on prevention. School officials developed a peer education intervention that trained interested youth in grades 6–12 to deliver educational interventions to elementary school classes in the area.

This approach continues to be modestly effective at raising awareness about tobacco use among younger students. However, teenagers, school officials, and others in the community realized that they were only addressing part of the problem. In 1999, 42% of youth in grades 9–12 in the state reported smoking at least once during the past 30 days, according to the Youth Risk Behavior Surveillance System. Also, 15.7% reported using chewing tobacco or snuff at least once during the past 30 days. Although tobacco use was prohibited on school grounds, teenagers still smoked and chewed at school. Those who were caught using tobacco faced detention or possible suspension.

The idea of developing a youth tobacco-use cessation intervention, which ultimately was named Teens In Control, came from two students who were serving detention for tobacco use. They wanted to stop their tobacco use but did not know how or what resources were available. The teacher in charge of detention that day brought the students' concerns to the school counselor, who in turn shared them with an advisor for the school's tobacco prevention intervention. The subject was addressed at the next meeting of the intervention's advisory board, which includes youth, parents, school administrators, teachers, and a representative from the local health department. They agreed to work on a cessation intervention designed for teenagers.

# 2

# Getting Started

## Assessing Whether to Implement an Intervention and Developing a Plan

When planning a tobacco-use cessation intervention for youth, you should invest time and energy in developing plans for implementation and evaluation first. This will help you achieve your goals and use your resources effectively. More information is available in later chapters on what types of interventions to consider (Chapter 3), how to plan the evaluation process (Chapter 5), and how to conduct evaluations (Chapter 5).

This chapter will help you

- Determine whether your organization can or should support an intervention to help youth quit using tobacco.
- Identify the key elements you should consider when developing your intervention plan.
- Understand how to set realistic goals for your intervention.
- Learn the importance of involving stakeholders in planning activities.

### Understanding Your Organization's Role and the Needs of Your Community

Before you select an intervention or develop a plan for its implementation, you should do the following:

- Assess current tobacco prevention and control efforts in the area where you plan to provide services (e.g., a school, community, state or province) and decide where further effort is needed. Assess whether other activities might benefit youth more. Try to determine whether there are gaps that need to be filled to establish a comprehensive tobacco control program.

- Evaluate where your organization could have the greatest impact in reducing tobacco use. If you believe a youth tobacco-use cessation intervention is the best choice, consider whether your organization is prepared to support that intervention and how it will fit with the organization's other interventions and services. Examine your organization's role and credibility in the community you serve. You will have a better chance of succeeding if you have the support of all levels of your organization and the community you serve.

- Determine whether your organization has the capacity to implement a youth tobacco-use cessation intervention that will meet the needs of your community. If your organization lacks sufficient resources, consider partnering with another group or supporting existing initiatives.
- Assess the needs of the youth you serve and the ability of your organization to serve them. Figure 3 presents a list titled Assessing Community Needs and Your Organization's Capabilities, which can be used to create a profile of the population you intend to serve. Every organization will not have to conduct a formal needs assessment before selecting and implementing a youth tobacco-use cessation intervention. However, every group should take time to address these issues to ensure that implementing an intervention is the best approach and that the intervention selected is appropriate.

Even if you have decided already to implement a youth tobacco-use cessation intervention, the assessment list will help you to develop your implementation plan. Other recommended steps include the following:

- Set realistic goals, including specific expectations for how the intervention will be delivered (e.g., what method will be developed and used to deliver it, what personnel will be needed, how youth will be recruited, what level of effectiveness is expected).
- Determine the best type of intervention (see Chapter 3) based on your program's resources and the needs of your target population. You can choose an existing or prepackaged intervention or develop one with help from researchers and other experts.
- Recruit and train staff to deliver the intervention. If you want staff members to contribute to the planning process, recruit them beforehand. Develop an implementation plan that considers issues such as youth access, recruitment strategies, and the cultural relevance of intervention materials. Anticipate potential challenges, and prepare a backup plan whenever possible.
- Enlist the help of evaluation experts, if possible, to identify indicators for tracking the intervention's progress and outcomes. If evaluation experts are not available in your area, be prepared to conduct basic evaluation activities yourself (see Chapter 5). The quality and consistency with which an intervention is delivered is often as important as its composition and outcomes. The first step is to collect baseline information about the young tobacco users you plan to serve.
- Proceed with implementing, monitoring, and evaluating the intervention.

**FIGURE 3. Assessing Community Needs and Your Organization's Capabilities**

To assess the needs of the youth you plan to serve and the ability of your organization to serve them, consider the following factors.

**Target Population Profile**

- Number of youth expected to participate in the cessation intervention.
- Their age(s) or grade level(s).
- Types and amounts of tobacco used.
- Significant patterns of tobacco use (e.g., use in particular social situations or physical settings, age at which use typically begins).
- Physical factors that may influence tobacco use and cessation (e.g., medical conditions, involvement in athletic activities, pregnancy).
- Emotional or psychological factors that may influence tobacco use and cessation (e.g., depression, social anxiety, violence or other risk-taking behavior).
- Other substance use/abuse.
- Involvement in academic activities, performance in school, and level of literacy.
- Social situations (e.g., peer groups, religious affiliations) or cultural differences that might affect tobacco use and cessation.
- Tobacco-use status of family members or others who live with your target population.
- Other family situations that might influence youth tobacco use and cessation (e.g., the presence or absence of parents, relationships with siblings, socioeconomic status, access to health care, family expectations about youth behavior, substance abuse or mental illness in the family).
- Apparent level of interest or motivation to quit among youth and their willingness to participate in supportive interventions or services.
- Previous or current involvement in tobacco-related counseling, disciplinary actions, or activities designed to change behavior.
- Previous or current participation in counseling or therapeutic interventions not related to tobacco.
- Previous or current participation in extracurricular school activities or other organized leisure activities.
- Segments of the target population that may be difficult to reach (e.g., high school dropouts, youth living in rural areas).

**Community Context/Environmental Factors**

- Level of support or demand among community members (e.g., parents, school administrators, health care providers) for tobacco-use cessation services for youth.
- Level of support or demand for other youth programs and services, compared with support or demand for cessation services.
- Community activities and interventions that reinforce tobacco-use cessation messages (e.g., prevention programs, mass media campaigns, increased price of tobacco products).
- Existing tobacco-control policies in the community (e.g., restrictions on youth access to tobacco products, tobacco use in public spaces, or tobacco product advertising) and the degree to which they are enforced.
- Pro-tobacco messages to which youth are exposed (e.g., events sponsored by tobacco companies; advertisements in stores, magazines, or other public venues).
- Social acceptability of tobacco use in the community and factors that may lead to community resistance to cessation activities (e.g., local economic dependence on tobacco production, cultural norms involving tobacco use).
- Opportunities for intervening in the community to increase interest in youth tobacco-use cessation (from young tobacco users and other members of the community).

**Sponsoring Agency/Organization Profile**

- Level of priority placed on tobacco control, substance-use prevention and treatment, and the health and well-being of youth within the mandate and activities of the sponsoring agency or organization.
- Leaders within the organization who have indicated or demonstrated support for youth tobacco-use cessation activities.
- Existing interventions or services sponsored by the organization that may either compete with or reinforce the cessation intervention's messages about tobacco use.
- Level of support for the intervention (e.g., funds, services, materials) and mechanisms of funding support (e.g., through new revenue sources, partnerships, reallocation of funds).
- Other agencies or organizations involved in cessation activities or adolescent services that might be willing to form partnerships or add youth tobacco-use cessation activities to their existing services.
- Estimates of the potential costs to the organization, including costs for personnel, material resources, and activities aimed at recruiting youth and encouraging them to fully use the services. Estimates of whether the benefits to youth will justify the costs.
- Time period during which resources to support the intervention are guaranteed (e.g., 1 school year, 3 fiscal years).
- Credibility of the agency or organization as a source of information for youth who might take advantage of the cessation intervention and in the community at large.
- Organizational goal for the intervention (e.g., to ensure that youth in the community have access to effective cessation programs, to provide a program that will help 20% of young smokers quit over the next year).

## Your Implementation Plan

Clearly identifying your target audience, your organization's strengths and weaknesses, and the reinforcements and barriers to implementing an intervention in your community will help you deliver a better intervention. Figure 4 presents a list titled Key Elements of an Intervention Plan, which will guide you through planning your intervention. Information collected with the previous assessment list (page 17) also will be useful at this stage.

Although the key elements listed in Figure 4 should be considered during the planning process, your understanding of them may improve after you implement your intervention. Your intervention is an open system that will evolve over time as it adapts to its environment. Continued reassessment of key factors is recommended.

### SETTING REALISTIC GOALS

Cessation should be viewed as a process, not a single event. Achieving sustained abstinence from tobacco use may be difficult for some people but not others, regardless of their apparent or reported motivation to quit. Unique challenges faced by young tobacco users (e.g., perceptions that youth who smoke are independent, mature, or "cool") add to the complexity.[1]

Typically, the more intensive the intervention, the higher the quit rate.[2] However, intensive interventions usually require a significant investment of resources, which may not be appropriate given your organization's capacity and the current limits in best practices for youth tobacco-use cessation interventions.

Think carefully when establishing goals for your intervention. Do you hope to motivate as many young tobacco users as possible to quit? Or to provide as much support as possible to those already committed to quitting? When selecting and planning an intervention, balance its *reach* (i.e., the number of youth who will receive cessation messages) with its *intensity* (i.e., the amount of time spent in treatment, the type of interaction, and the supporting services provided). For example, if a low-intensity intervention has a quit rate of only 1%–2% but reaches 100,000 youth, the result is 1,000–2,000 youth who quit using tobacco. This intervention would have a greater impact than one with a quit rate of 20% that reaches only 50 people. Consider the goal of providing the most intensive intervention possible to the greatest number of youth within the constraints of available resources.

Whatever approach you choose, most of the participants are not likely to succeed on their first attempt. Make plans to re-engage participants or try a different approach if they return to tobacco use either during or after the intervention. These plans should include ideas on how to increase motivation and commitment to quitting.

**FIGURE 4. Key Elements of an Intervention Plan**

Several factors should be considered when planning your intervention. Collecting information on the key elements outlined in this list will guide you through this process.

- Number of youth who could benefit from tobacco-use cessation interventions or services, as well as the number who have expressed interest in the service or a willingness to participate.
- Expected quit rate and other potential benefits (e.g., improvements in general health).
- Time available to develop and implement an intervention and the period during which it can be delivered.
- Available budget.
- Settings (e.g., high school classrooms) or channels (e.g., by telephone) through which interventions can be delivered.
- Ways in which youth can learn about the availability of the intervention.
- Costs associated with the settings or channels used to deliver and advertise the intervention (e.g., renting space, providing additional funding to existing telephone quitline services).
- Ways in which youth can access the intervention (e.g., release from class, transportation to venues outside school, wide publication of telephone quitline numbers, advertisements during youth-oriented television and radio programming).
- Sources of referral (e.g., physicians, teachers) to the intervention and whether enrollment is mandatory or voluntary.
- Persons who can support youth in their attempts to quit (e.g., peers, family members, community leaders, trained counselors).
- Strategies in place to re-engage youth who withdraw from the intervention (e.g., re-enrollment, referral to a more suitable intervention).
- Sources for locating and recruiting facilitators or counselors if they are not already present in the organization or ways to access existing services in other organizations.
- Sources of funding or resources (including sufficient time) to ensure that facilitators or counselors (if required) are trained in the intervention and on general topics related to youth development and behavior.
- Payroll costs for staff members, if required.
- Indicators of facilitators' credibility with the target population (e.g., certification, previous experience).
- Ways in which ongoing supervision will be provided for staff members, facilitators, and/or counselors (including peer support, if relevant).
- Print materials (e.g., work sheets, games, brochures) needed and ways to obtain or develop them.
- Other materials needed and sources for obtaining them.
- Costs associated with materials and equipment.
- Ways in which costs can be kept low without compromising the integrity or effectiveness of the intervention (e.g., finding donated materials or services, linking to existing cessation services).
- Ways in which the intervention will be monitored to determine whether it is implemented and delivered as intended.

If you select an existing intervention that has been evaluated previously, you should have some idea of what kind of success rate to expect. However, examine how the evaluation was conducted, and remember that results may not be reproducible in different settings with different populations. Success rates can vary even when the same provider delivers the same intervention in the same manner. Evaluation studies are often conducted under ideal, controlled conditions that are not reproducible in other settings. Before choosing to replicate an existing intervention, consider the characteristics of the population that participated in the evaluation and how the evaluation data were gathered (see Chapter 5 for information on how to determine the quality of an evaluation).

### INVOLVING STAKEHOLDERS

To avoid problems later, engage stakeholders early in the process. Possible stakeholders include leaders in your organization, community leaders, people who work directly with youth, and the young people who make up your target audience. These interested parties can help you plan your intervention. Start by reviewing the components of a comprehensive tobacco control program with them. Educate them about the limitations of current youth tobacco-use cessation interventions and the available options (e.g., expanding existing services such as quitlines to include youth, expanding media campaigns, promoting policy initiatives, implementing youth cessation interventions). Know and demonstrate the critical role your organization in particular can play in the various options. Present the potential benefits to youth and the community as a whole, relative to the projected costs to the organization or community, of the various options. If the cost is greater than available resources, make the case for partnerships that will ease the financial burden.

When working with stakeholders, take time to identify and prioritize their needs and expectations. Invite stakeholders to a planning work group, which can be used to develop a strategic plan for the intervention itself, as well as for surveillance and evaluation activities.

Different stakeholders will want to know different things about the intervention. Discuss with them what kinds of information they need at the beginning of the planning process. Some stakeholders may want to know what the intervention will cost per participant. Others will be more interested in participants' satisfaction with the intervention and participants' perception of your organization.

### RECRUITING YOUTH

Once stakeholders buy into the process and you select your intervention, market your intervention to the community—especially to young tobacco users who might be interested in quitting. Make sure they know that the service is being offered and what its key features and benefits are. Tips for recruiting youth include the following:

- Use your understanding of your target population to craft an appealing recruitment strategy. Use the information gathered in previous assessments, but be prepared to reassess and revise your profile over time.
- Emphasize that your intervention can make cessation easier. Many youth expect to quit without assistance and may not have considered getting help.
- Use existing social networks (e.g., clubs, sports teams, criminal justice diversion interventions, schools) to inform youth about the intervention. Use a variety of different networks to reach your target population.
- Consider offering small incentives (e.g., prizes, snacks) for participation.

Although incentives have not been shown to increase cessation rates, they can improve rates of recruitment and retention. Promotional items (e.g., T-shirts, water bottles) tied to the intervention can provide an incentive that also communicates basic information about the intervention. The decision to offer incentives will depend on your resources and the type of intervention you offer.

- Use a variety of media formats (e.g., Web sites, videos, brochures, newspaper advertisements, posters, announcements at schools) and presentation methods (e.g., classroom presentations by staff members or peers, information booths at school and community events).
- Involve youth in your recruitment efforts. Peers will often be able to influence other youth to participate when those perceived as authority figures would fail. Nontraditional leaders and youth who have successfully quit tobacco can be persuasive recruiters. Young people can also tell you what strategies will work best with their peers.

### PLANNING FOR EVALUATION

Develop an evaluation plan as part of your planning process. Evaluation does not just occur after the intervention has concluded. It is an ongoing process designed to monitor a variety of factors that may influence the intervention's outcomes. Begin planning your evaluation soon after you select the type of intervention you want to implement. To determine whether your intervention is meeting its goals, your evaluation plan should outline 1) what information will be collected, 2) who will provide the information, 3) how often and at what intervals information will be collected, and 4) for what purpose this information will be used (see Chapter 5 for more details).

The evaluation plan also should clearly define its terminology. Although "cessation" is the most important outcome of any cessation intervention, you must establish a specific definition (e.g., abstaining from any tobacco use for 24 hours, 7 days, 30 days, or 6 months) and a specific point in time when cessation will be assessed (e.g., 6 months or 1 year after the quit date). Secondary actions that can be measured—and also must be defined—include the number of cigarettes smoked during a specific period, motivation to quit, self-efficacy for quitting, and number and duration of quit attempts.

### OTHER PLANNING TASKS

Your implementation plan should clearly identify who will conduct the intervention activities and where they will be delivered.

Recruit, train, and supervise staff members who understand and can work competently with youth. Depending on the nature of your intervention, you may find staff through local universities, health organizations, or consulting services, or within your school or organization. Be sure that staff members who have

direct contact with youth are trusted by the youth themselves, your organization, and the community. Provide ongoing support and appropriate supervision.

Intervention providers can include peers, teachers, community leaders, trained facilitators, health care workers, or others with whom youth have a positive and trusting relationship. All providers must understand the needs and perspectives of the specific group of youth with whom they will work.

Identify the specific physical locations (e.g., pediatric offices, schools, community recreation centers) where the intervention can be delivered, as well as the specific channels (e.g., by telephone, through individual or group face-to-face sessions) that will be used to relay information. To produce printed materials, you may need a graphic designer, desktop publisher, or printer. If you plan to use the Internet or other computer resources, you may need additional technical support.

## References

1. Balch GI. Exploring perceptions of smoking cessation among high school smokers: input and feedback from focus groups. *Preventive Medicine* 1998;27(5 Pt 3):A55–A63.
2. Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; 2000.

Examples A and B show how one state health department and one rural county school system chose and implemented a youth tobacco-use cessation intervention.

**EXAMPLE A-2**

## How One State Developed a Tobacco Quitline for Youth

As part of its Tobacco Prevention and Control Program (TPCP), a health department in a western state decided to develop a statewide telephone quitline for youth. Program officials knew they needed something that would reach youth who were not being served by existing services. Once they had determined that a quitline was the best way to address this need, most of their planning activities focused on the specifics of making this intervention work. An advisory committee was established to oversee all TPCP activities.

First, TPCP staff members tried to predict call volumes for the quitline so they could budget accurately. They considered such factors as the total number of teenaged smokers in the state and the average percentage of smokers in other populations that use quitline services. They consulted with other quitline operators and state agencies.

Next, the staff worked with the state's private media contractor to develop a comprehensive marketing strategy consisting of radio and television advertising as well as peer-based marketing approaches.

Staff members also worked with an attorney from the state health department on issues related to parental consent. On the basis of two state laws, the attorney advised that parental consent was not needed because no medication was being prescribed, no direct medical advice was being given, and controversial issues such as family planning or sexuality were not being discussed. The attorney also helped ensure that an appropriate protocol was in place to handle issues and situations beyond the scope of the quitline (e.g., reports of abuse, threats of suicide) that might arise.

**EXAMPLE B-2**

## A Rural County High School's Cessation Intervention

Responding to concerns from students, a school system in a county with a largely rural population decided to expand its tobacco-use prevention intervention to include a cessation component. Initially, the members of the intervention's advisory board wanted to target all teenagers in the county who smoked or used spit tobacco. They discussed the resources needed to reach a group that could potentially be very large and decided to target a smaller primary audience instead. They settled on high school students (grades 9–12). If demand arose for the intervention in lower grades, they would expand to include students from one middle school (grades 6–8) to test how the intervention was received.

The faculty sponsor of the prevention intervention, called Teens Against Tobacco Use (TATU), suggested that a specific staff person at the high school be recruited to lead the new cessation intervention. The sponsor also recommended that 1–2 other staff members be trained as backups.

The advisory board then discussed a potential budget and the types of costs that would be associated with a cessation intervention. To help recruit and retain staff members and parent volunteers as intervention leaders, the advisory board decided to offer a small stipend.

Additional money would be needed for training, materials, and refreshments. TATU provided $250 in start-up funding, with the understanding that the new cessation group would apply for money from other sources (e.g., the school system, county health department, a state tobacco-use prevention intervention, local foundations and charities).

The advisory board also decided to create a work group on tobacco-use cessation that would include additional stakeholders—most notably, young tobacco users. The two students who initially requested a cessation intervention were invited to attend. Other new participants included a medical professional from the community and a representative from a local social services agency that wanted to work more with at-risk youth.

The work group conducted a brief needs assessment to better define its objectives. Data from the Youth Risk Behavior Surveillance System indicated a 42% smoking rate among state teenagers. During the past year, 163 of 800 students at the high school had received detention or been suspended for tobacco use.

Given these facts, the work group set the following objectives for its intervention:

- Reduce the rate of tobacco use among high school students in the county by 15%.
- Create an alternative intervention for students who received detention or suspension for tobacco use that would encourage more tobacco users to quit.
- Reduce the number of students receiving detention for tobacco use by one-third.

The advisory board decided that the new cessation intervention should remain strongly connected to the activities of the broader prevention intervention. Board members recognized that, although cessation services were needed, prevention and policy efforts were more likely to alter the culture of tobacco use in the area. Tying the prevention and cessation efforts together also might help both get more grant funding.

# 3

# Selecting a Cessation Intervention for Youth

Although sufficient research exists to support specific interventions for adult tobacco-use cessation,[1] we know little about how to effectively help youth quit. The evidence that does exist on youth tobacco-use cessation suggests that certain approaches are not effective or appropriate (i.e., sensory deprivation, the use of fear appeals alone). Approaches that show the most promise are those that include cognitive–behavioral components, which seek to change the tobacco user's thought processes and behaviors.

Further research is needed to determine which approaches are most effective and in what combination they should be provided. Specific interventions cannot be recommended at this time. Instead, youth tobacco-use cessation interventions should only be provided within the context of a comprehensive tobacco control program, which is most likely to create a supportive environment for quitting. All interventions should be carefully evaluated.

In the absence of specific scientific evidence for selecting the best intervention, this publication offers practical suggestions on the basis of the professional experience of the members of the special advisory panel.

This chapter will help you

- Decide which type of tobacco-use cessation intervention will best serve your youth population.
- Understand how different intervention methods apply to different intervention goals.
- Understand how different intervention methods apply to different intervention goals.
- Recognize the basic components of cognitive–behavioral interventions, which are considered promising for youth tobacco-use cessation.

## Tips for Choosing an Intervention

If you are considering an existing intervention that you have access to already or a prepackaged intervention that is available from another organization, make sure you have a clear, thorough description of the entire intervention. The following information will help you evaluate the intervention:

- Intervention goals, objectives, and desired outcomes.
- Intervention content, including a curriculum if applicable.
- An implementation protocol.
- Recruitment strategies.
- Training manuals.
- Examples of materials for participants.
- Evaluation tools and results.

Before you select an intervention, expect to see some evidence of its effectiveness. Even if an intervention has not been formally or appropriately evaluated, you may decide to implement it anyway on a trial basis. If so, you should conduct your own rigorous evaluation to determine if the intervention is effective in your community. Chapter 5 describes the type of evaluation data you should expect from the intervention's developers.

If you decide to implement an existing intervention, make sure its instructions are clear and that the implementation protocol is flexible. You should fully understand the steps necessary to implement the intervention effectively. Because an existing intervention is unlikely to be a perfect fit for your population, flexibility is critical. However, changes in protocol can alter the effectiveness of an intervention, so a rigorous evaluation will be required.

Look for an intervention that was developed for and tested with youth from similar cultural, developmental, and educational backgrounds as those you intend to serve. Find out if the intervention's developers will provide technical assistance to help you adapt the intervention to your target population.

Look for an intervention that uses a cognitive–behavioral approach, which seeks to change thought processes and the behaviors they influence (see page 33 for more on this approach). The evidence review panel that helped develop this publication found that interventions with these principles show promise for youth tobacco-use cessation.

### Ways to Deliver Cessation Interventions

Once you've decided what type of intervention to use, you must decide how to deliver it, given the resources and capabilities of your organization and the needs of your target population.

Figure 5 describes the most common methods for delivering tobacco-use cessation interventions and indicates which should be considered for youth. The presentation of this information does not constitute an endorsement of

**FIGURE 5. Common Methods for Delivering Tobacco-Use Cessation Interventions and How They Apply to Different Goals for Youth**

| INTERVENTION GOALS | INTERVENTIONS TO CONSIDER TO MEET YOUR GOALS | INTERVENTIONS LEAST SUITED TO MEETING YOUR GOALS |
|---|---|---|
| To reach a large audience. | Brief interventions.<br>Telephone counseling.<br>Self-help, non-interactive.<br>Self-help, computer-interactive. | Face-to-face counseling. |
| To reach youth with limited access (e.g., geographic isolation, lack of transportation, lack of time) to services. | Telephone counseling.<br>Self-help, non-interactive.<br>Self-help, computer-interactive. | Face-to-face counseling. |
| To serve youth with significant psychological and/or physical comorbidities (e.g., depression, substance abuse, asthma, eating disorders). | Face-to-face counseling. | Self-help, non-interactive.<br>Self-help, computer-interactive.<br>Telephone counseling. |
| To reach youth with tobacco-related health problems. | Brief interventions in medical settings.<br>Face-to-face counseling. | Self-help, non-interactive.<br>Self-help, computer-interactive. |
| To reach youth without regular health care. | Telephone counseling. | Brief interventions in medical settings. |
| To serve youth who need intensive support. | Face-to-face counseling.<br>Group counseling. | Self-help, non-interactive.<br>Self-help, computer-interactive.<br>Brief interventions. |
| To serve youth who need more individualized or tailored interventions. | Face-to-face counseling.<br>Self-help, computer-interactive.<br>Telephone counseling. | Self-help, non-interactive. |
| To reach youth who are part of an already defined group or community (e.g., school, youth club). | Group counseling. | |
| To serve youth who want peer support/interaction. | Group counseling. | Self-help, non-interactive.<br>Self-help, computer-interactive. |
| To serve youth who prefer one-on-one interactions. | Face-to-face counseling.<br>Telephone counseling. | Group counseling. |
| To reach youth who want anonymity when seeking help. | Self-help, non-interactive.<br>Self-help, computer-interactive.<br>Telephone counseling. | Face-to-face counseling.<br>Group counseling. |
| To serve youth who are self-motivated and directed. | Self-help, non-interactive.<br>Self-help, computer-interactive.<br>Telephone counseling. | |
| To serve youth with little motivation to quit. | Brief interventions that use motivational techniques. | Self-help, non-interactive.<br>Self-help, computer-interactive. |
| To serve youth who are comfortable with and have access to computer technology. | Self-help, computer-interactive. | |
| To reach youth with low levels of literacy. | Telephone counseling.<br>Face-to-face counseling.<br>Group counseling. | Self-help, non-interactive.<br>Self-help, computer-interactive. |

one method over another. Although most of these approaches have been proven effective with adults, the evidence and scientific rigor are lacking to determine their effectiveness with youth. Youth have unique needs and preferences, and an intervention that is effective with adults is likely to be received differently by youth.

### BRIEF INTERVENTIONS

In a brief intervention, a health care or other trained provider (e.g., teacher, law enforcement official) identifies tobacco users and advises them about the consequences of tobacco use and the steps they can take to quit. These are face-to-face interventions usually delivered to one individual at a time, but they are too short (usually no more than 5 minutes) to qualify as counseling. Brief interventions typically involve an assessment of tobacco use, dependence, and motivation to quit; advice on the benefits and methods of quitting; and assistance with quitting, including referrals to other treatment. They are designed to serve as a catalyst to stimulate further cessation efforts by the tobacco user.[1]

Whether brief advice from a health care provider is an effective way to help youth quit is unclear because of the lack of scientific evidence. Sufficient evidence does exist that this approach is effective for adults. One recent study indicated that even if the effectiveness of brief advice from a clinician is low for adolescents, this approach could be cost-effective (because it is provided during a visit scheduled for another purpose) and have a potentially large reach.[2] Also, for adults, if multiple clinicians of various types provide brief advice, abstinence rates increase significantly compared with interventions that do not include any clinician advice.[1]

### SELF-HELP, NON-INTERACTIVE SUPPORT

The self-help, non-interactive approach includes minimal interventions that do not require responses from the client and are delivered through written or audiovisual materials or on a computer. Examples include videotapes or brochures on how to quit tobacco use. Different self-help materials can be prepared to meet different program or population needs. They can be delivered alone or used with more intensive interventions.

Evidence from adult interventions suggests that self-help, non-interactive materials are not likely to be useful for youth tobacco-use cessation if they are implemented alone. Instead, they should be paired with other interventions (e.g., telephone counseling, clinician advice, group programs).[1]

### SELF-HELP, COMPUTER-INTERACTIVE SUPPORT

This approach uses computer technology to assess a person's tobacco use and motivation to quit. The intervention then uses behavior change strategies that

promote cessation to tailor counseling and feedback to that person. Unlike self-help, non-interactive interventions, which may use computers to deliver information, these interventions require responses to specific prompts from the computer.

Whether self-help, computer-interactive support is effective for youth or adult tobacco-use cessation is unknown. When evaluated as one element of an adult cessation program, this approach alone did not have a significant effect on abstinence.[1] Also, if youth usually smoke while on the computer, some may associate tobacco use with computer use. Thus, using the computer could trigger tobacco use.

### TELEPHONE COUNSELING OR SUPPORT

This approach delivers support or counseling by telephone rather than through face-to-face encounters. Telephone interventions can offer support of varying intensity while reducing many barriers associated with other cessation services (e.g., the need for transportation, the problem of scheduling appointments, confidentiality versus disclosure to supervisory adults). Although use of telephone interventions (e.g., quitlines) is typically initiated by the tobacco user, some interventions include an optional, proactive call-back schedule for more intensive support. Most states and provinces have existing quitlines that already provide—or could provide—counseling to teenaged tobacco users.

Whether telephone counseling is an effective approach for youth tobacco-use cessation is unclear. The evidence of effectiveness for adults is strong.[1,3]

### ONE-ON-ONE, FACE-TO-FACE COUNSELING

One-on-one, face-to-face counseling is delivered in person by a trained counselor or therapist using any of a variety of behavior change strategies. This is generally the most intensive way of delivering an intervention, and a substantial investment of resources is typically required. To use this approach, programs must have sufficient capacity to recruit, train, and supervise facilitators or to support existing services provided to adults.

Few data exist on the effectiveness of one-on-one counseling for youth tobacco-use cessation, although there is sufficient evidence of its effectiveness among adults. Adult cessation guidelines indicate that person-to-person treatment delivered for four or more sessions appears to be especially effective in increasing abstinence rates.[1] They also note that a strong dose-response relationship exists between rates of successful treatment outcomes and the total amount of person-to-person contact time (i.e., the number of sessions multiplied by the session length). Specifically, abstinence rates increase when total contact time lasts at least 90 minutes, but do not continue to increase when total contact time is longer than 90 minutes.

### PHARMACOTHERAPY

Unlike other interventions, pharmacological interventions do not attempt to change behavior. Instead, they seek to alleviate the symptoms of physical withdrawal from nicotine during the quitting process, with the goal of making behavior change easier. These interventions include medications that contain nicotine to reduce withdrawal symptoms and those that do not contain nicotine but help reduce cravings. The U.S. Food and Drug Administration (FDA) has approved the following over-the-counter medications for tobacco-use cessation for adults: nicotine gum, nicotine patch, and nicotine lozenge.[1] Medications available by prescription include the nicotine inhaler, nicotine nasal spray, and bupropion sustained-release tablets. In Canada, Health Canada has approved all of these except the nicotine inhaler and nasal spray.

Certain factors must be taken into account when considering pharmacological therapies for youth. First, the FDA has not approved pharmacotherapy—either over-the-counter or by prescription—for anyone younger than 18 years. Second, although research has shown that such interventions are very effective with adults, there is no scientific evidence that they can help youth quit. Pharmacotherapy has not been tested extensively with younger populations, but the studies that have been conducted have not shown positive results.[1]

Before you consider pharmacotherapy as an intervention for youth, make sure you are confident of each person's tobacco dependence and intention to quit. Also, a health care provider should assess each participant.[1] This provider must be capable of assessing the appropriateness of the use of medications, the likelihood of abuse, and the potential contraindications, as well as be able to provide prescriptions.

### GROUP COUNSELING

This approach involves the planned and structured delivery of behavior change strategies through a series of sessions delivered to a group of youth. Groups often use mutual support as well as counseling by trained facilitators. As with one-on-one counseling, your organization must have sufficient resources to recruit, train, and supervise facilitators. Fewer counselors are needed than for one-on-one counseling, but this approach will likely require more facilitators than telephone counseling.

Evidence is insufficient to prove that group counseling is effective for youth. Most of the studies assessed for this publication examined interventions delivered in group formats. However, the study design for most of these studies was not strong enough to determine the effectiveness of the group format for youth tobacco-use cessation. Sufficient evidence does exist to show the effectiveness of group counseling that uses multiple behavior change strategies with adults.[1]

### METHODS TO AVOID

During the literature review for this publication, two types of intervention approaches were deemed ineffective or inappropriate for youth. The first is the sensory deprivation environment method, which requires that youth be placed in an environment that deprives them of sensory stimulation (e.g., a dark room) to help them clarify any conflicting feelings they have about tobacco use. The second method uses fear appeal tactics alone. This approach relies solely on “scare tactics” (e.g., showing pictures of diseased lungs, presenting people who have been disfigured by a tobacco-related disease) to change tobacco behavior by evoking fear of the possible consequences of tobacco use.

### SELECTING AMONG DELIVERY METHODS

Some methods of delivering an intervention are more promising (e.g., one-on-one, group, and telephone counseling) than others (e.g., self-help materials). Other factors to consider when choosing an intervention include the feasibility of expanding existing cessation services, the cost of the intervention, the need for ancillary services, and various characteristics of your target population. Also, as discussed in Chapter 2, you must balance reach and intensity.

## Principles of Cognitive–Behavioral Interventions

One promising theoretical approach to behavior change for youth tobacco-use cessation employs principles of cognitive–behavioral interventions.[4–7] The basic premise of cognitive–behavioral theory (CBT) is that people can learn new behaviors to use in response to stimuli and that the thought processes that serve as an intermediate step between the stimuli and the behavior can be altered, thereby influencing behavior (see Figure 6). Tobacco-use cessation

**FIGURE 6. A Cognitive–Behavioral Model for Change**

Cognitive–behavioral theory (CBT) was developed from two theoretical streams—behaviorism (or behavioral theory) and cognitive theory. CBT uses a theoretical model that can be diagrammed as follows for a tobacco-use intervention:

$$S \rightarrow O \rightarrow r \rightarrow R$$

S = **Stimulus control,** a method whereby cues (e.g., tip sheets on refrigerators) are provided to a person as a reminder of the desired behavior (e.g., not using tobacco).

O = **Organism,** which is the person seeking help to quit using tobacco. More specifically, it refers to internal processes such as thoughts and feelings. Influences at this stage include techniques designed to change how a person thinks about his or her tobacco use and to train that person to think differently about engaging in this behavior. This part of the model separates CBT from strictly behavioral approaches (Goldfried MR, Davison GC. *Clinical Behavior Therapy.* New York: Holt, Rinchart and Winston; 1976).

r = **Response.** CBT seeks to modify or alter a person’s responses. For example, a person can be taught new skills (see Figure 7) to help him put down a cigarette or find another activity to engage in when craving nicotine.

R = **Reinforcement,** which is necessary to help the person continue performing a new behavior (e.g., chewing on a toothpick) instead of the old behavior (e.g., using tobacco).

interventions that employ cognitive–behavioral methods seek to identify and change the cognitive processes that maintain tobacco use, and then teach skills or strategies that can help stop tobacco use and maintain cessation.

Although many different interventions are based on CBT, the same terminology is not always used. For example, some studies of cessation interventions have separated motivational enhancement from CBT, although strategies that use this technique (e.g., motivational interviewing) are typically based on CBT principles.[4,8]

## Cognitive–Behavioral Components

Basic elements of a cognitive–behavioral intervention for tobacco-use cessation include the following:

- Establishing self-awareness of tobacco use.
- Providing motivation to quit.
- Preparing for quitting.
- Providing strategies to maintain abstinence.

This list is not meant to be a blueprint for developing a cessation intervention. However, it can help you assess whether a proposed intervention uses a cognitive–behavioral approach. The following sections provide guidance on recognizing cognitive–behavioral components of your planned intervention.

### ESTABLISH SELF-AWARENESS OF TOBACCO USE

- Have participants record their personal tobacco-use behavior (e.g., in a diary or journal).
- Discuss thoughts, beliefs, and reasons for using and not using tobacco (e.g., the misleading influences of advertisements, the influence of peers who use tobacco).
- Teach participants the facts about the physical and psychological effects of tobacco use, the long-term consequences, and the effects of their tobacco use on others.

### PROVIDE MOTIVATION TO QUIT

- Ask participants to identify their personal reasons for wanting to quit (e.g., cost, harmful effects of use, desire not to be dependent).
- Point out discrepancies between their reasons for quitting and their reasons for continuing to use tobacco (e.g., within social groups), which may undermine the cessation attempt.
- Help participants make a commitment to quitting tobacco use forever. This may include decision-making activities and public or private declarations.

### PREPARE FOR QUITTING

- Work with participants to set a specific and reasonable quit date.
- Help participants decide on a method of quitting (e.g., cold turkey, using pharmacotherapy, tapering) and develop short- and long-term goals appropriate to the method chosen.
- Teach participants about the physical and psychological symptoms of withdrawal.

### PROVIDE STRATEGIES TO MAINTAIN ABSTINENCE

- Use problem-solving techniques that allow participants to identify and minimize the effects of triggers that may cause them to return to tobacco use. This process typically involves 1) identifying a danger situation for tobacco use, 2) generating several possible strategies for coping with that situation, 3) evaluating the possible coping strategies, 4) planning and implementing the best coping strategy for the situation, 5) evaluating the effectiveness of the chosen strategy, and 6) re-evaluating the situation and selecting other solutions if necessary.
- Help participants develop coping skills (see Figure 7).
- Help participants seek social support from peers, family, and other people besides the intervention providers.
- Build motivation for maintaining abstinence.
- Develop a strategy for self-monitoring and reinforcement of new behaviors.

---

**FIGURE 7. Skills Training**

Skills training is a way to modify people's responses to stimuli. In a tobacco-use cessation intervention, participants are taught skills that allow them to respond to stimuli in a healthy manner rather than by using tobacco. Youth may turn to tobacco use because they lack healthier ways to respond to problems (e.g., resisting peer pressure, coping with anger). Thus, skills training is likely to be an important element of a youth tobacco-use cessation intervention. A variety of skills, including the following, can help youth stop using tobacco:

- **Assertiveness training,** for youth who have difficulty expressing their views or making their own decisions when pressured (e.g., resisting offers of tobacco).
- **Social skills training,** for youth who have more general difficulties in interpersonal situations. This often includes teaching effective communication (i.e., listening and speaking) skills.
- **Anger control,** for youth who have difficulty controlling anger, who exhibit anger inappropriately, or whose anger may lead them to use tobacco.
- **Social support seeking,** to teach youth how to ask others for help.
- **Relaxation training,** for youth who have difficulty relaxing and may use tobacco to relax. This includes physical relaxation methods such as yoga and cognitive methods such as meditation.
- **Problem solving,** to enable youth to identify and cope with high-risk situations that could lead to a return to tobacco use.

Cognitive–behavioral components can be delivered using a variety of methods, including face-to-face counseling; telephone counseling; and self-help, computer-interactive interventions. Whatever method you choose, make sure the intervention activities are linked in a logical manner.

## References

1. Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; 2000.
2. Coffield AB, Maciosek MV, McGinnis JM, et al. Priorities among recommended clinical preventive services. *American Journal of Preventive Medicine* 2001; 21(1):1–9.
3. Hopkins DP, Briss PA, Richard CJ, et al. and the Task Force for Community Preventive Services. Reviews of evidence regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. *American Journal of Preventive Medicine* 2001;20(2 suppl):16–66.
4. Sussman S, Dent CW, Lichtman KL. Project EX: outcomes of a teen smoking cessation program. *Addictive Behaviors* 2001:26(3):425–438.
5. Glasgow RE, Strychker LA, Eakin EG, Boles SM, Whitlock EP. Concern about weight gain associated with quitting smoking: prevalence and association with outcome in a sample of young female smokers. *Journal of Consulting and Clinical Psychology* 1999;67:1009–1011.
6. Aveyard P, Cheng KK, Almond J, et al. Cluster randomised controlled trial of expert system based on the transtheoretical ("stages of change") model for smoking prevention and cessation in schools. *British Medical Journal* 1999;319:948–953.
7. Sussman S, Dent CW, Burton D, Stacy AW, Flay BR. *Developing School Based Tobacco Use Prevention and Cessation Programs.* Thousand Oaks, CA: Sage Publications; 1995.
8. Miller WR, Rollnick S. *Motivational Interviewing: Preparing People to Change Addictive Behavior.* New York: Guilford Press; 1992.

Examples A and B show how one state health department and one rural county school system chose and implemented a youth tobacco-use cessation intervention.

**EXAMPLE A-3**

## How One State Developed a Tobacco Quitline for Youth

As part of its Tobacco Prevention and Control Program (TPCP), a health department in a western state decided to develop a statewide telephone quitline for youth. Officials used a competitive bidding process to choose a specific quitline plan and a company to operate it.

An advisory committee established to oversee TPCP activities and expenditures set forth several requirements, including the following:

- Proposed interventions had to use strategies that had been proven effective or showed promise.
- The interventions would not include pharmacotherapy.
- Applicants had to have an existing infrastructure to support the intervention.
- Applicants had to have mechanisms in place to ensure that staff members who provided direct services to youth were properly trained and able to build an appropriate level of trust and rapport.

The intervention plan chosen provided a toll-free telephone number that could be accessed confidentially from anywhere in the state. Services were tailored to callers' readiness to quit, and parents could call for information to help their children. Although committee members knew that a quitline for youth was a largely untested medium, they felt the proposed plan was strong. The contractor providing the service had numerous years of experience in implementing quitlines with adults. In developing this intervention plan, the contractor had conducted several focus groups with teenagers, reviewed existing literature, and consulted with experts in youth tobacco-use cessation. This information was used to fully adapt a long-running adult intervention that used motivational interviewing and cognitive–behavioral techniques.

The quitline also fit well with the state's existing network of services. It provided a referral source and reinforcement for other state and local youth tobacco-use cessation interventions, a well-developed call to action for the mass media, and a strong complement to the many school- and community-based prevention efforts being implemented.

During the selection process, TPCP staff members noted the need for an intervention that would complement the strong network of tobacco-use cessation classes already in place across the state. The quitline provided a referral service to these classes, as well as additional options to youth not interested in cessation classes.

**EXAMPLE B-3**

## A Rural County High School's Cessation Intervention

Responding to concerns from students, a school system in a county with a largely rural population decided to expand its tobacco-use prevention intervention to include a cessation component for local high school students. The cessation work group established to oversee this project gathered information about existing interventions to determine which one would meet its population's needs. Group members wanted a curriculum that was research-based but one with which their target audience could identify.

Teenaged members of the work group conducted two informal focus groups with tobacco users at their school to find out what they wanted from a cessation intervention. The results indicated that students wanted a cessation intervention that

- Was not boring and allowed them to be active.
- Was not "just another class." Young tobacco users stressed their desire to have fun.
- Offered food.

Factors considered by group members when they chose their intervention included its cost and the reputation of the organizations that developed it. The intervention's services were free, and participants were allowed to name the intervention themselves (they chose Teens In Control). A small grant paid for intervention materials and a stipend for facilitators. Donations were sought from local businesses so that refreshments could be provided at meetings.

# 4

# Understanding How to Best Serve Your Youth Population

This chapter will help you

- Prepare for the challenges you may face when working with youth on the potentially sensitive issue of tobacco use.
- Better understand differences among the youth you hope to serve.
- Understand young people's concerns about quitting tobacco or using a cessation intervention, and be better prepared to respond to these concerns.

If you have decided to implement a tobacco-use cessation intervention for youth, you should understand the challenges you are likely to face. Some of these challenges are common to a range of youth-focused activities. Others will be unique to your particular goals and capabilities and to the specific youth population you serve. Other intervention providers have encountered many of these challenges before you and found various ways to address them.

Because all youth are not the same, you should closely examine the specific population you plan to serve when selecting your intervention. Individual characteristics of youth can influence their participation in a cessation intervention and their subsequent success in quitting.

Examples include the following:

- Age and developmental stage.
- Socioeconomic status and education level.
- Ethnicity and cultural background.
- Sex.
- Patterns of tobacco use.
- Risk-taking behavior and psychological conditions.
- Physical conditions affected by tobacco use.
- Acceptability of tobacco use and commitment to cessation.

- Tobacco use by peers and family.
- Peer and family support for cessation.
- Time availability.
- Knowledge, attitudes, and beliefs about tobacco.
- Self-esteem and self-image.
- Sense of control.
- Behavioral skills.

This chapter discusses some of these characteristics in greater detail and presents ideas on how to adapt interventions to deal with various concerns and differences among the youth you serve.

## Differences Among Youth That May Influence Your Intervention

Researchers have not established which characteristics are most important when tailoring a tobacco-use cessation intervention for youth. More research is needed to determine how different characteristics affect outcomes. However, it is safe to say that your intervention should be as appealing and appropriate to your target population as possible. If you vary your basic intervention for specific subpopulations, track these variations closely and take them into account in your evaluation (see Chapter 5). The information you gather can help others who intend to design or implement cessation interventions for specific groups of young people.

### AGE, SEX, EDUCATION, AND CULTURAL BACKGROUND

Youth of different ages and levels of development, different levels of education and literacy, and different cultural backgrounds will likely respond differently to your intervention. These factors influence decisions about and patterns of tobacco use, so they are likely to play a role in cessation as well.

If the intervention you select is not appropriate for the specific age group or level of development of your target population, it is more likely to fail. You also must consider whether your population is predominantly male or female. Prevalence of cigarette use is roughly equivalent among male and female youth, but young men are more likely to use other tobacco products.[1] In the United States, 21.8% of high school males and 21.9% of high school females were current smokers in 2003.[2] In Canada, the prevalence of current cigarette smoking was higher among females (23%) than males (21%) in 2002.[3]

When broken down by race/ethnicity, current smoking rates in the United States for 2003 were highest among white high school students—24.9% for whites compared with 18.4% for Hispanics and 15.1% for blacks.[2]

Other data show that youth who perform poorly academically (defined as having low grades, failing to graduate, being frequently truant, and lacking aspirations) are more likely to use tobacco.[4,5] Consider this factor when selecting a setting for your intervention. Although school-based interventions may have other benefits, they might not reach the youth in your community who are at higher risk for continued tobacco use.

Your intervention should be appropriate for the literacy levels of your target population. Otherwise, it is more likely to fail than an intervention designed for and evaluated with a population similar to yours. An intervention also is more likely to fail if it alienates youth by being insensitive to their cultural background.

### PSYCHOLOGICAL CONDITIONS

Psychological or behavioral problems (ranging from simple stress to depression or attention deficit disorder) complicate tobacco cessation for youth. A positive correlation has been shown between depression and smoking in youth.[6] Some studies suggest that tobacco use may cause depression, whereas others suggest that young people who are experiencing depression may self-medicate with tobacco to relieve symptoms. Other personality and psychological factors, such as a lack of impulse control or social anxiety, also may influence tobacco use. However, more research is needed to determine how and to what degree these factors affect tobacco use and cessation attempts.

Given the potential for the presence of psychological disorders among youth who use tobacco, programs with sufficient resources should screen for these disorders and refer youth for appropriate treatment. Some youth will not be able to stop using tobacco unless they have received or are receiving treatment for the underlying problems that motivated its use in the first place.

### PHYSICAL CONDITIONS AFFECTED BY TOBACCO USE

Youth who have preexisting health conditions that are exacerbated by tobacco use are not necessarily less likely to use tobacco. One recent study found that youth with asthma are nearly 1.5 times more likely to smoke than those who do not have asthma, even though smoking can compound shortness of breath and other health problems associated with this disease.[7]

Tobacco use also is prevalent among pregnant adolescents, in spite of the damage it is known to cause to unborn children. In 2001, 6.0% of mothers younger than age 15 and 17.5% of those aged 15–19 years smoked during their pregnancies.[8] Creating guilt, however, is unlikely to motivate young pregnant women to quit using tobacco. Instead, intervention providers should seek to help young women understand that quitting empowers them to create healthier lives for themselves and their children.

Knowledge about the long-term health consequences of tobacco use has not been shown to influence whether youth begin to use tobacco.[9] However, knowledge about short-term consequences can influence such behavior. Thus, getting young tobacco users to think about how tobacco affects their current health and well-being will likely be more effective. For example, focus on how tobacco use affects physical appearance and presentation (e.g., yellow teeth, bad breath).[9]

### PATTERNS OF USE

Unlike adults, many young tobacco users have inconsistent patterns of use. They may limit use to certain times of the week or year, certain social or emotional situations, or particular locations. Because of this, youth may not feel they are "addicted" and may resist identifying themselves as "smokers" or "regular" tobacco users.

Therefore, your cessation intervention should include all youth who want to stop using tobacco regardless of their level of use. When working with youth, stress that no matter how much or how little tobacco they use, they may be addicted, and that anyone who uses tobacco may need help quitting.

### COMMITMENT TO CESSATION

Young people's commitment to cessation will typically fluctuate more than that of adults, just as their patterns of tobacco use do. Young people may express a desire to "stop" using tobacco but not see a need to "quit," which denotes a commitment to long-term or permanent cessation. Stopping tobacco use may seem less daunting to some, and intervention providers should be willing to work with youth whose goal may only be temporary cessation (temporary cessation can become long-term cessation). Regardless of how they define cessation, young people should be educated about the nature of their dependence on tobacco and the challenges they will face when trying to quit or stop as well as the benefits.

When working with youth who are not fully committed to quitting, intervention providers should focus on motivating them to become more interested in stopping their tobacco use. It is possible to understand and alter a person's motivation to change behaviors even at an early stage before the negative consequences of that behavior are fully realized.[10]

A well-designed intervention can move a significant percentage of tobacco users from apathy or skepticism to an interest in cessation. Therefore, if resources permit, programs can include "unmotivated" youth in their interventions.

### PEER AND FAMILY TOBACCO USE AND SUPPORT FOR CESSATION

Tobacco use is a behavior typically influenced by peer and family attitudes and behaviors. Youth who have friends or family members who use tobacco are likely to have greater access and exposure to tobacco products and are more likely to smoke themselves.[9] One large study found that youth who are exposed to both a family member and a best friend who smoke have a 90% greater chance of smoking than youth who are not in the same situation.[11] If young tobacco users have friends or family who support cessation or reject tobacco use, they may be more motivated to engage in cessation activities.

Interventions also can include a mechanism to help youth identify a supportive friend or family member who can support them through the quitting process. This person should be someone they feel comfortable talking with about their tobacco use, as well as someone who does not use tobacco. Encourage youth to discuss their desire to quit and their possible need for support (such as information on how to recognize and avoid triggers or someone to offer encouragement).

Although little research has been conducted on family-based tobacco-use cessation interventions for youth, several studies have shown family interventions to be effective for substance abuse treatment with adolescents.[12]

### TIME AVAILABILITY

Youth often have significant time constraints because of commitments such as school, schoolwork, extracurricular activities, jobs, and other obligations or priorities. They also are less likely than adults to have their own cars or to have money to pay for other modes of transportation. Because of their age, they may have less control over where or when they can attend intervention activities.

Therefore, your intervention should be flexible in terms of when youth can participate and how they can obtain services and materials. If your intervention is not easy to access, consider providing options for transportation.

Many programs use school-based interventions to improve accessibility for youth. However, such interventions may not reach youth who do not attend school regularly, and some youth will have concerns about privacy because schools are public settings. Also, interventions may be difficult to schedule around existing classes and extracurricular activities at some schools.

### KNOWLEDGE, ATTITUDES, AND BELIEFS ABOUT TOBACCO

Youth who smoke are likely to have several misconceptions about tobacco use that should be addressed. For example, they tend to overestimate the prevalence of tobacco use among their peers[13,14] and underestimate the addictive potential of nicotine.[9] If youth believe that others, particularly peers and family members,

approve of tobacco use, they are more likely to use it themselves.[9] Young smokers are more likely than nonsmokers to have positive attitudes and beliefs about tobacco use (e.g., it makes them look more mature or reduces stress).[15]

Youth also are susceptible to tobacco advertising, and those who are exposed to frequent advertisements for tobacco are more likely to smoke than those who are not.[16] Research has shown that U.S. youth who smoke buy the most heavily advertised brands of cigarettes.[9] In Canada, tobacco advertising, including the distribution of promotional items, is banned.

### BEHAVIORAL SKILLS

Some young people may use tobacco because they lack the skills to deal with problems in a more positive manner. For example, they may use tobacco in an attempt to reach a particular goal, such as acceptance by peers or a temporary reduction in stress.[9] However, youth can be taught skills to help them resist peer pressure to smoke. Enhancing young people's self-esteem, self-mastery, and decision-making skills can enable them to more easily adopt and maintain healthy behaviors such as not smoking.[9]

Teaching the behavioral and coping skills necessary to resist social influence to smoke is an important part of the cognitive–behavioral model recommended in this publication. See Chapter 3 for more information on the types of skills that young tobacco users might need.

## Youth Needs and Preferences

The more you understand about the needs and preferences of the particular youth you serve, the better prepared you will be to address their concerns about quitting tobacco and participating in a cessation intervention. Common issues that should be considered include young people's need to experiment, their fears about the consequences of quitting (e.g., increased stress, weight gain, rejection by peers), their need to control their own lives, and their need for privacy.

### NEED TO EXPERIMENT

Most youth who begin using tobacco do not plan to continue doing so for the rest of their lives. They are simply experimenting with something to see whether they will like it or what possible benefits they would gain from it. In some cases, they will start using tobacco to show others that they are mature or because they have other (often mistaken) beliefs about what it can do for them.

Adolescence is a time when people typically experiment with new things, take new risks, and test boundaries. You should recognize that this behavior is normal. At the same time, you can teach youth that such behavior does not have to be expressed in a self-destructive manner such as tobacco use. You can talk with them about other ways to express their individuality and maturity.

### DEALING WITH ANXIETY AND STRESS

Some youth may have concerns about how difficult it will be for them to quit. They may feel that their lives are stressful already, that using tobacco helps relieve this stress, and that quitting would increase it. In such cases, you can talk with youth about the stimulant properties of nicotine, which can actually increase stress with prolonged use. This discussion may help them to understand that tobacco will provide only short-term relief from anxiety and stress and will actually increase long-term stress. For youth who are experiencing more extreme forms of anxiety, intervention providers should refer them for appropriate counseling.

### FEAR OF GAINING WEIGHT

A common concern expressed by youth, particularly young women, is that they will gain weight if they quit using tobacco. If they express this concern, be prepared to talk with them about ways to achieve and maintain a healthy body weight. Among adults, smokers generally weigh less than nonsmokers and gain weight after they quit smoking.[17] However, changes in body weight that occur after smoking cessation are generally small, and the health benefits of smoking cessation greatly outweigh any risks associated with weight gain.[17,18] No studies have examined whether weight changes occur among adolescents who quit smoking.

### FEAR OF BEING REJECTED BY PEERS

Youth who use tobacco tend to overestimate the use of tobacco by their peers.[13,14] Therefore, they may feel that “everyone else” is using tobacco and that if they do not, they will not fit in. Talk with them about the actual prevalence of tobacco use among their peers, which will help them realize that most adolescents do not smoke. They can be reassured that “real” friends should not reject them if they quit using tobacco and that they may become more attractive to peers who do not smoke. You can involve peer counselors or, if participants agree, specific friends to help reassure youth that quitting will not alienate them from their peers.

### NEED TO CONTROL THEIR LIVES

Many teenagers feel that they lack control over their lives. Tobacco use appears to be a way to assert control. Although they cannot choose where they live, for example, they can choose to smoke. Although this may appear to be a barrier, it can actually be used to encourage cessation.

For example, you can discuss with youth how the tobacco industry tries to influence their decisions and how tobacco use is really a form of compliance with industry marketing. By contrast, quitting can be framed as something a person can control, which may create a sense of self-efficacy.

You also can engage youth in a discussion about how highly addictive nicotine is and how addiction represents a lack of control. Although many youth may not be addicted now, discuss with them how continued use will likely cause nicotine addiction to develop. Even if they can decide now when they do or do not want a cigarette, they might not always have that power.

Some youth may be suspicious if they perceive that intervention providers are trying to control their decisions. For example, focus groups conducted among smokers aged 14–18 revealed that participants were generally unfamiliar with the idea of seeking or accepting professional help for quitting.[19] Some found the idea unimaginable, and many were skeptical about the effectiveness of cessation interventions. However, people who commonly work with youth have found that such attitudes can be overcome if the providers take time to let youth know who they are and why they are providing the intervention before asking the youth to commit to participating.

#### NEED FOR PRIVACY

Youth often conceal their tobacco use from family members or authority figures. Engaging them in interventions to help them quit sometimes requires assurance that their privacy will be maintained.

However, many schools and organizations also require parental consent for a young person's participation in activities that deal with sensitive topics such as tobacco use. Before you begin your intervention, make sure you understand the consent laws for minors in your state or province. If parents do not know that their children smoke, asking for parental consent to enroll those children in a cessation intervention will be awkward. The importance of obtaining parental consent must be weighed against the potential benefit of engaging youth in these activities.

Intervention providers have found different ways to deal with this problem. Some present tobacco-use cessation as just one possible element in a comprehensive health intervention offered to all youth. For some school-based interventions, providers ask that all parents give permission for students to participate in cessation services regardless of whether they use tobacco.

## References

1. Centers for Disease Control and Prevention. Youth Tobacco Surveillance—United States, 2000. *Morbidity and Mortality Weekly Report* 2001;50(No. SS-04).
2. Centers for Disease Control and Prevention. Cigarette smoking among high school students—United States, 1991–2003. *Morbidity and Mortality Weekly Report* 2004;53(23):499–502.

3. Health Canada. Canadian Tobacco Use Monitoring Survey. Annual Results, 2002. Available at http://www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2002/2002_supptables_eng.pdf.
4. Flay BR, Hu FB, Richardson J. Psychosocial predictors of different stages of cigarette smoking among high school students. *Preventive Medicine* 1998;27:A9–A18.
5. Lewinsohn PM, Brown RA, Seeley JR, Ramsey SE. Psychosocial correlates of cigarette smoking abstinence, experimentation, persistence and frequency during adolescence. *Nicotine & Tobacco Research* 2000;2(2):121–131.
6. Tercyak KP, Goldman P, Smith A, Audrain J. Interacting effects of depression and tobacco advertising receptivity on adolescent smoking. *Journal of Pediatric Psychology* 2002;27(2):145–154.
7. Zbikowski SM, Klesges RC, Robinson LA, Alfano CM. Risk factors for smoking among adolescents with asthma. *Journal of Adolescent Health* 2002;30(4):279–287.
8. National Center for Health Statistics. *Health, United States, 2003. With Urban and Rural Health Chartbook*. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2001:141. Available at http://www.cdc.gov/nchs/data/hus/tables/2003/03hus011.pdf.
9. U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention; 1994.
10. Miller WR. Motivation for treatment: a review with special emphasis on alcoholism. *Psychology Bulletin* 1985;98(1):84–107.
11. Evans N, Farkas A, Gilpin E, Berry C, Pierce JP. Influence of tobacco marketing and exposure to smokers on adolescent susceptibility to smoking. *Journal of the National Cancer Institute* 1995;87(20):1538–1545.
12. Liddle HA, Dakof GA. Efficacy of family therapy for drug abuse: promising but not definitive. *Journal of Marital and Family Therapy* 1995;21(4):511–543.
13. Pierce JP, Choi WS, Gilpin EA, Farkas AJ, Berry CC. Tobacco industry promotion of cigarettes and adolescent smoking. *JAMA* 1998;279:511–515.
14. Biener L, Siegel M. Tobacco marketing and adolescent smoking: more support for a causal inference. *American Journal of Public Health* 2000;90:407–411.
15. Mayhew KP, Flay BR, Mott JA. Stages in the development of adolescent smoking. *Drug and Alcohol Dependence* 2000;59(suppl 1):S61–S81.
16. Botvin GJ, Goldberg CJ, Botvin EM, Dusenbury L. Smoking behavior of adolescents exposed to cigarette advertising. *Public Health Reports* 1993;108(2):217–224.
17. U.S. Department of Health and Human Services. *Women and Smoking: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; 2001.
18. Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; 2000.
19. Balch GI. Exploring perceptions of smoking cessation among high school smokers: input and feedback from focus groups. *Preventive Medicine* 1998;27(5 Pt 3):A55–A63.

Examples A and B show how one state health department and one rural county school system chose and implemented a youth tobacco-use cessation intervention.

EXAMPLE A-4

## How One State Developed a Tobacco Quitline for Youth

As part of its Tobacco Prevention and Control Program (TPCP), a health department in a western state decided to develop a statewide telephone quitline for youth. One benefit of this type of intervention was that it could be tailored to callers' readiness to quit. Motivation was assessed for each caller to ensure that subsequent services were appropriate for that person's level of motivation and interest in quitting.

Youth could call and receive general information about tobacco use or receive a referral to a local class on tobacco-use cessation. If they were ready to quit but not interested in follow-up services, they could participate in a single, less-intensive intervention. If they were ready to quit and wanted intensive follow-up by telephone, they could participate in a multiple-call intervention that included callbacks at agreed-upon times. Parents also could call for general information about tobacco use and how they could help their teenaged children quit.

The counseling protocol for this intervention was based on motivational interviewing techniques designed to help the youth feel more confident about and interested in quitting. Quitline counselors were trained in cessation techniques and motivational interviewing and taught how to build rapport with youth. They were trained to counsel youth as support people who want to help, not as interventionists. The TPCP staff overseeing the intervention also provided information about relevant cultural concerns (e.g., religious issues specific to the state), which allowed counselors to be trained to respond appropriately. In addition, quitline services were available in multiple languages.

**EXAMPLE B-4**

## A Rural County High School's Cessation Intervention

Responding to concerns from students, a school system in a county with a largely rural population decided to expand its tobacco-use prevention intervention to include a cessation component for high school students. The cessation work group established to oversee this project wanted to ensure that the intervention met the specific needs of the intended audience. Three areas of special concern were the literacy/education level of the youth targeted, their socioeconomic backgrounds, and the role of tobacco in the culture of the area.

In this particular county, a high percentage of youth are at risk for not finishing high school because of academic and socioeconomic problems. Many of these students also use tobacco. Intervention materials needed to be in plain, simple language, and the number of handouts needed to be kept to a minimum. The work group wanted a curriculum that allowed plenty of opportunities for activity so that participants could learn by doing.

The county also has a high unemployment rate and, consequently, a high poverty level. Unfortunately, youth (and their parents) still spend money on tobacco even when they cannot always pay for more essential items. Thus, intervention materials were designed to emphasize the economic benefits of stopping tobacco use. Intervention planners believed that youth would respond to information about the amount of money they could save and the other items they could buy instead of tobacco.

Finally, the intervention planners had to consider the area's "culture" of tobacco use. Tobacco use (especially spit tobacco) was often seen as a rite of passage. Many generations of families had used tobacco, and getting youth to quit when their parents and other family members still smoked or chewed would be difficult. Planners tried to address this problem by linking the cessation intervention with programs that promoted adult cessation and attempted to change prevailing attitudes about tobacco.

# 5

# Monitoring Your Progress

## Evaluating the Process and Outcomes

This chapter will help you

- Understand the importance of evaluating your intervention.
- Develop an evaluation plan.
- Evaluate how well you have implemented your intervention (i.e., a process evaluation).
- Evaluate whether your intervention is effectively meeting your goals and addressing the needs of your target population (i.e., an outcome evaluation).

Because of the lack of scientific evidence on the effectiveness of youth tobacco-use cessation interventions, rigorous evaluations are more critical for these interventions than they might be for others. A simple but thorough evaluation will help you determine how closely you have followed your original plans and assess whether and how well your intervention fared in helping youth to quit tobacco use. A *process evaluation* examines how well you implemented and operated your intervention. An *outcome evaluation* determines whether the strategies you used were effective in attaining your goals. Evaluations also can be used to demonstrate that you used your resources appropriately to meet the needs of the community (i.e., for accountability).[1] In addition, you can use evaluation data to adjust your intervention and increase its effectiveness and impact over time. Finally, you will help other programs by increasing knowledge about which tobacco-use cessation interventions actually help youth quit—information that is critically needed at this time.

As part of any evaluation, you should document who is conducting what activities, under what conditions, for whom, and with what level of effort.[2] Depending on the type of intervention you select and the goals and objectives you want to achieve, you may need to consult with evaluation experts or partner with local researchers interested in intervention effectiveness. Only you will be able to determine what type of evaluation you can conduct and what assistance you will need. However, all programs should conduct basic evaluation activities to determine if their interventions are helping the target population.

If you choose a prepackaged intervention, some evaluation data may already be available. This will help you determine the level of evaluation you need to

conduct. If an intervention has been formally evaluated in an appropriate manner, you can conduct a less rigorous evaluation, because you will already have some sense of the intervention's effectiveness. Unfortunately, most of the interventions currently available have not been rigorously evaluated.

When reviewing evaluation data from an existing intervention, determine whether the evaluation was conducted by the people who developed the intervention or by external evaluators who might have been more objective. If an intervention has not been formally evaluated or if the previous evaluations were flawed, you will need to conduct a more rigorous evaluation to determine the intervention's effectiveness for your community.

### The Ideal Evaluation to Test Effectiveness

Not all methods for collecting and comparing data are equally valid. The best way to determine the effectiveness of an intervention is to use an *experimental design* (also called *randomized control trials*). This type of evaluation allows you to determine whether different approaches or interventions result in different outcomes. Participants are randomly assigned to different interventions, and results are measured over time. If the participants are all randomly selected, they should be similar in important ways (e.g., similar sex, age, level of tobacco use, achievement in school, socioeconomic status) regardless of the intervention group to which they are assigned.

In some settings, particularly schools, randomly assigning individuals to different intervention groups can be difficult. One solution is to randomly assign an entire school, rather than individual students, to an intervention. This method is an example of a *quasi-experimental design,* which is the second most useful type of evaluation.

If randomly assigning individuals or schools to an intervention group is not appropriate or feasible, intervention groups can be distinguished according to specific conditions (e.g., school characteristics) or by specific characteristics of participants that may affect the outcome (e.g., age, tobacco use, school achievement). Schools with similar characteristics or participants can be used as control groups.

Experimental and quasi-experimental designs provide data that allow you to compare groups and determine whether an intervention has been effective. Unlike either of these designs, data collected on a single group receiving the same intervention does not allow for comparison. Thus, you cannot determine whether that intervention was effective.

## Describing the Intervention and Participants

Before you implement an intervention, you must document the specific activities of your intervention and key information about potential participants. You should be aware of basic characteristics of the youth who express interest in your intervention, as well as those who actually participate. This information will help you determine whether you are reaching your target population or if you need to use different recruitment strategies to capture their interest. You also should prepare an evaluation plan (see Chapter 2) that lists your objectives and describes the basic elements of your intervention.

### INFORMATION ABOUT THE INTERVENTION

- Develop SMART (specific, measurable, attainable, realistic, and time-sensitive) objectives for the intervention.
- Define what outcomes will qualify as cessation (e.g., total abstinence for a defined period of time assessed at 6 months after the intervention; whether cessation is validated biochemically or by peers).
- Describe the recruitment methods you will use (e.g., communication channels, sources of referrals).
- Identify selection criteria to determine who might use the intervention (e.g., youth with a certain tobacco-use status, frequency of use, level of dependence, motivation to quit, stage of readiness for change).
- Indicate whether consent for participation (e.g., informed, parental) is required and how it will be obtained.
- Identify the types of facilitators or providers that will be used (e.g., the qualifications required and/or selection criteria used; individual characteristics of personnel; length and type of any training provided; cost of providing the interventions).
- Identify the intended location of the intervention (i.e., the type of facility or space required) and/or the method of delivery (e.g., telephones, computers).
- Describe the planned length of the intervention (i.e., the number and length of sessions).
- Describe the materials to be used and their costs (e.g., print materials, software, videos, development costs, reproduction costs per participant).
- Indicate whether incentives will be used to increase retention (including the types and cost of the incentives).
- Indicate whether pharmacotherapy will be provided, encouraged without being provided, or neither encouraged nor provided.

ESSENTIAL INFORMATION ABOUT PARTICIPANTS

- Collect contact information from participants, including their addresses, telephone numbers, e-mail addresses, and the names and telephone numbers of three people who would likely be able to contact them if they moved (for evaluation follow-up).
- Ask participants about the amount and type of tobacco they use and the frequency with which they use it now and have used it in the past.
- Screen for psychological or behavioral problems and high-risk behaviors.
- Measure participants' levels of motivation to quit.

OPTIONAL INFORMATION ABOUT PARTICIPANTS

- Collect demographic information on participants (e.g., sex, race/ethnicity, school status, type of school attended, highest grade completed).
- Ask about tobacco use by family members and friends.
- Ask about participants' previous cessation attempts and concurrent use of other interventions.
- Ask participants about their knowledge, attitudes, and beliefs about tobacco use and cessation interventions.

## Evaluating Implementation

To evaluate how well your organization implemented its planned intervention, you should conduct a process evaluation. The resulting information can help program managers and administrators identify strengths, weaknesses, and opportunities for improvement.

Although you will have previously documented your implementation plans and your intended audience, you are now documenting exactly what is happening and who is participating. For example, you may plan to implement five 1-hour group sessions. But once you begin the intervention, you find that you can only deliver three 1-hour and two half-hour sessions because of scheduling constraints. Although this change might not seem significant, decreasing the dosage of the intervention can affect the outcome. You might need to conduct additional sessions to maintain the intended dosage.

When conducting a process evaluation of a youth tobacco-use cessation intervention, certain key questions should be asked. Figure 8 lists these questions and briefly describes the sources that can help you answer them and how the resulting information can be used. The specifics of how and when information

is gathered will vary depending on your program's objectives and available resources. However, the primary methods include attendance logs, client surveys, and focus groups.

**FIGURE 8. Key Questions for Process Evaluations**

| KEY QUESTIONS | SOURCES OF INFORMATION | HOW TO USE THE INFORMATION |
|---|---|---|
| How many participants attended the first session? | Telephone logs (for interventions delivered via telephone).<br>Records of meeting attendance. | To determine the relative success of your recruitment methods. |
| How did participants hear about the intervention? | Entrance or pre-entrance surveys. | To determine the success of your marketing efforts and adjust recruitment methods for future activities. |
| How many participants completed the intervention? | Exit or post-intervention surveys.<br>Attendance records. | To determine the retention rate. |
| How satisfied were the participants with the quality of the services? | Exit or post-intervention surveys or focus groups.<br>Follow-up surveys or focus groups with youth who dropped out of the intervention. | To understand reasons for participant retention and identify areas for improvement. |
| What types of activities and how many of each type occurred during the implementation of the intervention? | Logs of intervention activities that were actually implemented. | To document how closely the intervention followed your plan. |
| What was the amount of time spent with participants? | Logs of session length and frequency. | To document intervention fidelity and determine the allocation of resources (financial or otherwise). |
| What aspects of the intervention deviated from the protocol? | Logs of intervention activities that were actually implemented and exceptions that were made. | To document intervention fidelity. |
| What staffing was required to implement the intervention? | Staff logs that note the number of hours worked and the rate of pay per hour. | To determine the allocation of human resources and costs. |
| How many staff training workshops were conducted (if relevant)? What evidence existed that the training helped staff members deliver the intervention? | Logs of staff training hours.<br>Staff surveys. | To determine the extent of staff training needed for a given level of effectiveness and to determine how much training improved staff effectiveness. |
| What money, services, and materials were used to provide the intervention? | Logs of program expenditures and donations of services and materials. | To determine if the intervention is cost-effective. |

The information collected during the planning phase and during and after implementation will help you to assess how well you followed your implementation plan or protocol. Closely following the protocol throughout implementation will help you make more accurate conclusions about the effectiveness of your intervention. However, you may need to make some changes to your initial plan (e.g., adapting the intervention to the environment in which it is delivered or modifying it to respond to the changing needs of your target population). When this happens, document all changes from your original plan and take these changes into account in your evaluation.

## Evaluating Effectiveness

An outcome evaluation will help you determine whether your intervention is meeting its objectives and understand the effect it is having on the target population. Outcome evaluations contribute to your knowledge as the intervention provider and to the knowledge in the field about which youth tobacco-use cessation interventions are effective. The data collected during the process evaluation also will help you to assess the relevance of the data collected during the outcome evaluation. Figure 9 lists these questions and briefly describes the sources that can help you answer them and how the resulting information can be used.

You can use the outcome evaluation to measure the quit rate of the participants in your intervention and determine whether this rate was higher than what you would expect for youth of similar backgrounds who did not receive the intervention (ideally, you will have a control group to compare your results against). Strongly consider measuring quit rates again after a follow-up period to determine if the intervention had a lasting effect. In addition to measuring intervention success, you should measure how many youth who initially agreed to participate actually remained in the intervention and how well they complied with the intervention.

When conducting an outcome evaluation, you should consider the following key concepts:

- **Retention.** Retention is expressed as a percentage that reflects the number of participants who stayed with the intervention through the last session divided by the number of participants who attended the first session. For example, if the intervention is intended to occur weekly for 8 weeks and 50 students participate in the first session but only 25 participate in the last session, the retention rate is 50%. This information is important because it gives you a sense of whether participants continued with the intervention long enough to receive the intended treatment. This is usually measured in the process evaluation.

**FIGURE 9. Key Questions for Outcome Evaluations**

| KEY QUESTIONS | SOURCES OF INFORMATION | HOW TO USE THE INFORMATION |
|---|---|---|
| How many tobacco users who started the intervention were no longer using tobacco<br>• At the end of the intervention?<br>• 6 months post-intervention?<br>• 12 months post-intervention? | Exit and post-intervention client surveys conducted at end of intervention and regularly thereafter (6 and 12 months preferred). | To determine the effectiveness of the intervention. |
| How many tobacco users were chemically validated (if chemical validation was used)? | Records of chemical validation tests (e.g., expired carbon monoxide or saliva cotinine testing). | To confirm reports of quitting. |
| How many serious quit attempts (e.g., >24 hours of nonuse with the intention of quitting) were made by each tobacco user<br>• At the end of the intervention?<br>• 6 months post-intervention?<br>• 12 months post-intervention? | Exit and post-intervention client surveys conducted at end of intervention and regularly thereafter (6 and 12 months preferred). | To compare the number of youth who attempted to quit with the number who successfully quit. |
| Are individuals using other types of tobacco besides cigarettes (e.g., chew, dip, bidies, cigars, pipes)? | Entrance or pre-entrance surveys and post-intervention client surveys. | To document all tobacco use and to determine whether smokers are switching to other tobacco products instead of quitting. |
| What was each individual's longest period of abstinence<br>• At the end of the intervention?<br>• 6 months post-intervention?<br>• 12 months post-intervention? | Exit and post-intervention client surveys conducted at end of intervention and regularly thereafter (6 and 12 months preferred). | To provide another outcome measure for youth who did not quit for good (i.e., did not meet the primary goal of the intervention). |
| How motivated, prepared, and/or confident were participants to quit<br>• At the beginning of the intervention?<br>• At the end of the intervention?<br>• 6 months post-intervention?<br>• 12 months post-intervention? | Entrance or pre-entrance surveys.<br>Exit and post-intervention client surveys conducted at end of intervention and regularly thereafter (6 and 12 months preferred). | To determine how motivation was influenced by the intervention and how motivation influenced quitting. |
| If participants are smokers, how many cigarettes do they smoke (e.g., each day, each week, each month)?<br>How much of a cigarette do they smoke?<br>What quantity of tobacco in other forms do participants use? | Entrance and post-intervention client surveys. | To track changes in consumption for youth who did not quit or remain abstinent. |

- **Implementation Compliance.** The implementation compliance rate indicates how many participants attended all or most of the sessions. This measure provides a sense of the dose or amount of treatment that participants actually received. This information also will help you determine how many participants received the intervention according to protocol.
- **Follow-up Period.** The follow-up period is the point in time after the intervention has ended at which tobacco use is measured again. A longer follow-up period (e.g., 6 months) gives you more confidence that participants will maintain their cessation. For the follow-up survey, you should ask whether participants used any other interventions, services, or pharmacotherapy outside of the intervention being evaluated that might have influenced treatment success.
- **Quit Rate.** The ideal outcome for your intervention is complete abstinence from tobacco use for a defined period after the intervention. This outcome might not be easy to achieve, because relapse is common with tobacco use. To determine quit rates, measure participants' tobacco use at the beginning of the intervention (i.e., the baseline), at the end of the intervention, and at a defined period after the intervention. Data collected at 6 months or longer after the intervention has ended are most reliable. The quit rate also should be based on the number of youth who attended the first session, not the number who attended the last session.

## Using Evaluation Data

As discussed in Chapter 2, evaluation can be used to demonstrate accountability to program stakeholders (e.g., partner organizations, project administrators and managers, participants). Sound evaluation data also will allow you to improve your intervention over time and help others do the same. Understanding basic evaluation methods will help you to determine if a previously evaluated intervention will meet your program's needs. If you are considering a prepackaged cessation intervention, you should request the same type of data that we have suggested you collect for your own evaluation, particularly long-term quit rates.

## References

1. MacDonald G, Starr G, Schooley M, et al. *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2001.
2. Nutbeam D, Smith C, Catford J. Evaluation in health education: a review of progress, possibilities, and problems. *Journal of Epidemiology and Community Health* 1990;44(2):83–89.

EXAMPLE A-5

## How One State Developed a Tobacco Quitline for Youth

As part of its Tobacco Prevention and Control Program (TPCP), a health department in a western state decided to implement a statewide telephone quitline for youth. Once officials had chosen an intervention method, they developed plans to evaluate its effectiveness. Using previous experience with other tobacco-use cessation services and data from other quitlines, the staff overseeing the intervention established outcome expectations by which to measure the intervention's success.

TPCP staff members worked with the contractor operating the quitline to develop an extensive evaluation protocol. This protocol included assessing tobacco use for each caller, conducting a small satisfaction survey at 3 months post-intervention, and conducting a quit-rate survey 6 months after the intervention.

Staff members also tracked demographic information, changes in readiness to quit among youth who participated in multiple calls, and changes in attitude and confidence in quitting or staying quit. To evaluate how well the intervention was implemented and operated, they also conducted a process evaluation. Process measures, including telephone protocol issues (e.g., response rates, length of time required to return calls left on voice mail), were tracked through monthly and quarterly progress reports.

Examples A and B show how one state health department and one rural county school system chose and implemented a youth tobacco-use cessation intervention.

**EXAMPLE B-5**

## A Rural County High School's Cessation Intervention

Responding to concerns from students, a school system in a county with a largely rural population decided to expand its tobacco-use prevention intervention to include a cessation component for local high school students. The cessation work group established to oversee this project understood the importance of determining the intervention's level of success, and they planned evaluation activities early in the process. To cover the range of activities involved in the intervention, they divided their objectives into those related to process and those related to outcome.

Process objectives included the following:

- By October of the upcoming school year, implement a tobacco-use cessation intervention for youth at the county high school.
- Serve at least 90 students with this intervention, called Teens In Control, by the end of the same school year.

Outcome objectives included the following:

- By the end of the school year, decrease the number of detentions and suspensions related to tobacco use by one-third.
- By the end of the school year, increase the number of quit attempts reported by youth who currently use tobacco.
- By the end of the school year, increase the number of youth who report quitting tobacco use.

Student volunteers from a local community college helped conduct surveys and collect data to evaluate the intervention. Because the intervention was not fully implemented until November, services lapsed during the holiday break. As a result, some students did not complete the intervention (60 students completed the intervention the first year). Intervention facilitators were confident that they could solve this problem by starting earlier in the school year. Work group members determined that additional marketing efforts were needed to let students (and their parents) know about the cessation resources available to them.

# Appendix: Resources

## CHAPTER 1

**Publications**

American Academy of Health Behavior. Special Issue on Youth Tobacco Cessation. *American Journal of Health Behavior* 2003;27(suppl 2).

National Cancer Institute. Population Based Smoking Cessation: Proceedings of a Conference on What Works to Influence Cessation in the General Population. In: *Smoking and Tobacco Control Monograph No. 12*. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; 2000. NIH Pub. No. 00-4892.

National Cancer Institute. Changing Adolescent Smoking Prevalence. In: *Smoking and Tobacco Control Monograph No. 14*. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; 2001. NIH Pub. No. 02-5086.

U.S. Department of Health and Human Services. *Reducing Tobacco Use: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2000.

Substance Abuse and Mental Health Services Administration. *Reducing Tobacco Use Among Youth: Community-Based Approaches, A Guideline*. Washington, DC: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention; 1997. DHHS Pub. No. (SMA)97-3146.

Farrelly MC, Vilsaint M-C, Lindsey D. Cigarette Smoking Among Youth: Results from the 2000 National Youth Tobacco Survey. *Legacy First Look Report 7*. Washington, DC: American Legacy Foundation; 2001.

Raw M, Anderson P, Batra A, et al. WHO Europe Evidence Based Recommendations on the Treatment of Tobacco Dependence. *Tobacco Control* 2002;11:44–6. Available at http://tc.bmjjournals.com/cgi/content/full/11/1/44.

Wasserman MP. Guide to Community Preventive Services: State and Local Opportunities for Tobacco Use Reduction. *American Journal of Preventive Medicine* 2001;20(Suppl 2):8–9.

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

**Internet Resources**

Office on Smoking and Health, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services. Available at http://www.cdc.gov/tobacco.

> CDC provides national leadership for a comprehensive approach to reducing tobacco use. CDC leads and coordinates efforts to prevent tobacco use among youth, promote smoking cessation among youth and adults, protect nonsmokers from environmental tobacco smoke, and eliminate tobacco-related health disparities. The Web site provides tips on how to quit, educational materials, and scientific publications.

National Cancer Institute (NCI), National Institutes of Health, U.S. Department of Health and Human Services. Available at http://www.smokefree.gov.

> The mission of NCI's Tobacco Control Research Branch is to lead and collaborate on research and to disseminate evidenced-based findings to prevent, treat, and control tobacco use. The Web site provides help in quitting smoking, including an online, step-by-step cessation guide and telephone numbers for local, state, and national quitlines.

Tobacco Technical Assistance Consortium (TTAC). Available at http://www.ttac.org.

> TTAC is a not-for-profit organization funded by the American Cancer Society, the American Legacy Foundation, and The Robert Wood Johnson Foundation to provide technical assistance and training to people working in the field of tobacco-use prevention and control. This support is designed to increase knowledge and skills, foster strong leadership, increase organizational support, and strengthen partnerships.

Center for Tobacco Cessation. Available at http://www.cessationcenter.org.

This Web site was developed by the Next Generation California Tobacco Control Alliance to help health care practitioners learn more about smoking cessation. The Online Cessation Resource Center is designed to be a central source for resources created by tobacco cessation and control experts to help health care providers in their daily practice.

*Guide to Community Preventive Services.* Available at http://www.thecommunityguide.org/tobacco.

This publication summarizes what is known about the effectiveness of community-based interventions in three areas of tobacco-use prevention and control: preventing tobacco-use initiation, increasing cessation, and reducing exposure to environmental tobacco smoke.

Communities of Excellence in Tobacco Control, American Cancer Society. Available at http://www.cancer.org/docroot/PED/content/PED_1_5X_Communities_of_Excellence.asp.

The Communities of Excellence program can help community groups and health professionals develop effective strategies to reduce and control local tobacco use. A planning guide provides information on how to develop action plans and organizational tips on how to achieve tobacco control goals.

Campaign for Tobacco-Free Kids. Available at http://www.tobaccofreekids.org.

This campaign is one of the nation's largest nongovernmental initiatives ever launched to protect children from tobacco addiction and exposure to secondhand smoke. The campaign's goals are to deglamorize tobacco use through counter-marketing, change public policies to protect children from tobacco use, and increase the number of organizations and individuals working to reduce tobacco use.

Canadian National Clearinghouse on Tobacco and Health. Available at http://www.ncth.ca.

This one-stop tobacco control resource provides current information on tobacco use trends, research, and statistics, as well as "best practices" in tobacco prevention and control in the areas of cessation, legislation, taxation, and environmental tobacco smoke.

Treatobacco.net: Database & Educational Resource for Treatment of Tobacco Dependence. Available at http://www.treatobacco.net.

This unique source provides evidence-based data on treating tobacco dependence compiled by a panel of international experts. Topics include the efficacy, safety, demographics, health effects, health economics, and policies of treatment for tobacco dependence.

CHAPTER 2

**Publications**

Kretzmann JP, McKnight JL, Sheehan G, Green M, Puntenney D. *A Guide to Capacity Inventories: Mobilizing the Community Skills of Local Residents.* Chicago: ACTA Publications; 1997. Available at http://www.northwestern.edu/ipr/publications/community/capinv.html.

**Internet Resources**

Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Available at http://www.cdc.gov.

National Public Health Performance Standards (NPHPS) Program. Public Health Program and Practice Office. Available at http://www.phppo.cdc.gov/nphpsp. The national public health performance standards were created for state and local public health systems and public health governing bodies.

*Planned Approach to Community Health: Guide for the Local Coordinator.* National Center for Chronic Disease Prevention and Health Promotion. Available at http://www.cdc.gov/nccdphp/patch/index.htm. Planned Approach to Community Health (PATCH) is considered an effective model for planning, conducting, and evaluating community health promotion and disease prevention programs.

*School Health Index: For Physical Activity, Healthy Eating, and a Tobacco-Free Lifestyle.* National Center for Chronic Disease Prevention and Health Promotion. Available at http://www.cdc.gov/HealthyYouth/SHI. A self-assessment and planning guide to 1) help schools identify the strengths and weaknesses of their health promotion policies and programs; 2) develop action plans for improving student health; and 3) involve teachers, parents, students, and the community in improving school policies and programs. For more information, e-mail healthyyouth@cdc.gov, call 1-888-231-6405, or fax 1-888-282-7681.

National Association of County and City Health Officials (NACCHO). Available at http://www.naccho.org.

*APEXPH Workbook*. Guides health officials in assessing and improving the organizational capacity of their departments and in working with local communities to assess and improve the health status of their residents. Available at http://www.naccho.org/cat1.cfm.

*MAPP Field Guide*. An easy-to-read overview of MAPP, a community-driven strategic planning process. Available at http://www.naccho.org/prod102.cfm.

*Making Strategic Decisions about Service Delivery: An Action Tool for Assessment and Transitioning*. A step-by-step guide to assessing whether to continue providing clinical services, determining how (if appropriate) to transition these services to other community providers, and monitoring community and patient outcomes resulting from the transferral of services. Available at http://www.naccho.org/project52.cfm.

National Association of Local Boards of Health (NALBOH). Available at http://www.nalboh.org.

NALBOH is a national partner in the National Public Health Performance Standards (NPHPS) Program. The NPHPS Program promotes continuous quality improvement, resulting in stronger connections among local public health system partners, greater awareness of the interconnectedness of public health activities, and identification of strengths and weaknesses that can be addressed through improvement efforts.

## CHAPTER 3

### Publications

U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General.* Atlanta: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention; 1994.

Lynch BS, Bonnie RJ, editors; Committee on Preventing Nicotine Addiction in Children and Youths, Institute of Medicine. *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths.* Washington, DC: National Academy Press; 1994.

*Guidelines for Adolescent Preventive Services (GAPS). Recommendations Monograph.* American Medical Association; 1997. ISBN: 0-89970-929-X. Available at http://www.ama-assn.org/ama/pub/category/1980.html.

### Internet Resources

ImpacTEEN: A Policy Research Partnership to Reduce Youth Substance Use. Available at http://impacteen.org.

ImpacTEEN is an interdisciplinary partnership of nationally recognized substance abuse experts with specialties in such areas as economics, etiology, epidemiology, law, political science, public policy, psychology, and sociology.

American Academy of Pediatrics (AAP). Available at http://www.aap.org/advocacy/chmcoun.htm.

AAP is committed to the attainment of optimal physical, mental, and social health and well-being for all infants, children, adolescents, and young adults. The Web site includes instructions for tobacco counseling and media education in the practice setting (i.e., understanding and confronting how images and messages in the mass media affect the health and well-being of children and adolescents), as well as educational materials for parents and teenagers on the risks of tobacco use.

Tobacco Control Research Branch, National Cancer Institute (NCI), National Institutes of Health, U.S. Department of Health and Human Services. Available at http://www.smokefree.gov.

The mission of NCI's Tobacco Control Research Branch is to lead and collaborate on research and to disseminate evidenced-based findings to prevent, treat, and control tobacco use. The Web site provides help in quitting smoking, including an online, step-by-step cessation guide and telephone numbers for local, state, and national quitlines.

The Robert Wood Johnson Foundation. Available at http://www.rwjf.org/programs.

The foundation seeks to improve the health and health care of all Americans through grant funding in four areas. The goal for one of these areas is to reduce the personal, social, and economic harm caused by substance abuse, including tobacco use. Grants are given to medical facilities, public schools, research organizations, and community groups.

*Examining Youth Tobacco Use Cessation and Relapse Prevention.* Health Canada; 1997. Available at http://www.hc-sc.gc.ca/hecs-sesc/tobacco/prog_arc/youth_smoking/.

This report looks at the factors associated with adolescent self-initiated smoking cessation. It explores the decision to quit, successful quit attempts, and relapse among youth smokers. The report reviews the effectiveness of existing smoking-cessation programs available to youth and provides recommendations for future research and programs in the area of adolescent smoking cessation.

## CHAPTER 4

### Publications

American Academy of Health Behavior. Special Issue on Youth Tobacco Cessation. *American Journal of Health Behavior* 2003;27 Suppl 2.

American Cancer Society. *A Resource Guide to Youth Tobacco Cessation Programs.* Atlanta: American Cancer Society, Tobacco Control Program; 1998.

### Internet Resources

The Center for Health and Health Care in Schools (CHHCS). Available at http://www.healthinschools.org/about.asp.

CHHCS seeks to strengthen the well-being of U.S. children and youth through effective health programs and health care services in schools by serving as a policy and program resource.

*Guidelines for Youth Tobacco Prevention/Intervention Services at Multnomah County School-Based Health Centers.* Available at http://www.healthinschools.org/sbhcs/tobacco/.

*Urban Institute Project Report.* Problem Behavior Prevention and School-Based Health Centers: Programs and Prospects. Appendix 6: Information, Ordering and Training Guide to Twenty-One Rigorously Evaluated Interventions. Available at http://www.healthinschools.org/sbhcs/papers/append6.asp.

*Tobacco Use Cessation Programs: An Inventory of Canadian Tobacco Cessation Programs and Resources. 2000 Update.* Available at http://www.hc-sc.gc.ca/hecs-sesc/tobacco/pdf/inventory_e.pdf.

This document lists cessation programs and services (e.g., self-help programs, group programs, counseling programs, toll-free quitlines, tobacco Web sites) currently available at national or provincial levels.

Tobacco Control Programme, Health Canada. Available at http://www.hc-sc.gc.ca/hecs-sesc/tobacco.

This Web site provides a wealth of information about tobacco prevention and control efforts in Canada, including federal policies and programs, cessation interventions, and media campaigns. Specific resources and information aimed at young people are available at http://www.hc-sc.gc.ca/hecs-sesc/tobacco/youth/index.html.

## CHAPTER 5

### Internet Resources

*Basic Guide to Program Evaluation.* 1999. Available at http://www.mapnp.org/library/evaluatn/fnl_eval.htm.

This document provides guidance toward planning and implementing an evaluation process for for-profit or nonprofit programs.

The Community Tool Box, University of Kansas. Available at http://ctb.ukans.edu/.

The Tool Box provides over 6,000 pages of practical information on how to promote community health and development.

Program Evaluation Tool Kit, Available at http://www.medicine.uottawa.ca/epid/chru/evaltoolkit_eng.htm.

The Program Evaluation Tool Kit is tailored to meet the information and decision-making needs of public health program managers. It also will be useful to field staff, medical officers, senior managers, and anyone assisting with evaluation (e.g., health unit program evaluation specialists, epidemiologists, community nurse specialists, health planners, information analysts, outside consultants).

Online Evaluation Resource Library (OERL), National Science Foundation. Available at http://oerl.sri.com.

This library was developed for professionals seeking to design, conduct, document, or review project evaluations. OERL's mission is to help continuously improve project evaluations, which are critical to determining project effectiveness.

*User-Friendly Handbook for Mixed Method Evaluations.* National Science Foundation; 1997. Available at http://www.ehr.nsf.gov/EHR/REC/pubs/NSF97-153/start.htm.

This handbook was developed to help evaluate the progress and effectiveness of projects funded by the National Science Foundation's Directorate for Education and Human Resources. Mixed method evaluation combines quantitative and qualitative techniques.

Collaborative, Participatory, and Empowerment Evaluation, American Evaluation Association. Available at http://www.stanford.edu/~davidf/empowermentevaluation.html.

This Web site presents information on empowerment evaluation, which uses both qualitative and quantitative methodologies. It includes a detailed list of Internet resources, software, handbooks, and guides.

User's Guide to Evaluation: Tools for National Service Programs, AmeriCorps, Project Star. Available at http://www.projectstar.org/star/Library/toolkit.html.

The User's Guide is designed to help programs meet key evaluation needs related to the following priority areas: education, public safety, human needs, and the environment.

**Youth Tobacco Cessation Collaborative**

Centers for Disease Control and Prevention

American Legacy Foundation

Canadian Tobacco Control Research Initiative

National Cancer Institute