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## Selecting a Cessation Intervention for Youth



Although sufficient research exists to support specific interventions for adult tobacco-use cessation,<sup>1</sup> 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.

### **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:

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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.
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  - Recognize the basic components of cognitive-behavioral interventions, which are considered promising for youth tobacco-use cessation.
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- 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. Telephone counseling. Self-help, non-interactive. 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. Self-help, non-interactive. 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. Self-help, computer-interactive. Telephone counseling.
To reach youth with tobacco-related health problems.	Brief interventions in medical settings. Face-to-face counseling.	Self-help, non-interactive. 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. Group counseling.	Self-help, non-interactive. Self-help, computer-interactive. Brief interventions.
To serve youth who need more individualized or tailored interventions.	Face-to-face counseling. Self-help, computer-interactive. 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. Self-help, computer-interactive.
To serve youth who prefer one-on-one interactions.	Face-to-face counseling. Telephone counseling.	Group counseling.
To reach youth who want anonymity when seeking help.	Self-help, non-interactive. Self-help, computer-interactive. Telephone counseling.	Face-to-face counseling. Group counseling.
To serve youth who are self-motivated and directed.	Self-help, non-interactive. Self-help, computer-interactive. Telephone counseling.	
To serve youth with little motivation to quit.	Brief interventions that use motivational techniques.	Self-help, non-interactive. 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. Face-to-face counseling. Group counseling.	Self-help, non-interactive. 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.<sup>1</sup>

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.<sup>2</sup> 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.<sup>1</sup>

#### **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).<sup>1</sup>

#### **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.<sup>1</sup> 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.<sup>1,3</sup>

#### **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.<sup>1</sup> 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.<sup>1</sup> 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.<sup>1</sup>

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.<sup>1</sup> 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.<sup>1</sup>

## 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.<sup>4–7</sup> 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, Rinehart 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.<sup>4,8</sup>

### **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.

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### 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

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**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.

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.



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**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.