

# HIV Provider *Smoking Cessation* Handbook



*A Resource  
for Providers*



**VA**  
HEALTH  
CARE

Defining  
**EXCELLENCE**  
in the 21st Century



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# I. HIV and Smoking



## CHAPTER SUMMARY

### Scope of the problem

- The incidence of smoking in HIV-infected Veterans is high and likely underreported
- Tobacco dependence is a chronic disorder that often requires repeated intervention and multiple attempts to quit
- Overall health consequences of smoking for those with HIV disease are more severe:
  - Greater probability of cardiovascular and pulmonary conditions
  - Greater risk of AIDS and non AIDS-related illnesses
- Smoking increases the all-cause mortality of HIV-infected current smokers

### Benefits of smoking cessation in HIV-infected smokers

- Smoking cessation can reduce and prevent many smoking-related health problems
- Smoking is the most clinically important modifiable cardiovascular risk factor for HIV-infected smokers
- HIV-related symptoms decrease as early as three months after smoking cessation
- Every attempt to quit improves probability of eventual success

### The HIV care provider's role

- Address smoking at every visit. Effectiveness starts with the clinical routine of:
  - Documenting a patient's smoking status
  - Advising patients to quit and inquiring about their readiness at every visit
  - Approaching smoking as a chronic illness, which includes monitoring repeated quit attempts and relapses
  - Counseling and prescribing a combination of two smoking cessation medications
- Help patients access comprehensive care to address co-morbidities hindering their ability to quit
- Utilize an integrated model of care and provide a consistent message about smoking

## CHAPTER SUMMARY

- Utilize a team approach as it results in greater efficacy in long-term follow up and represcribing smoking cessation medications

### Challenges to smoking cessation in HIV-infected smokers

- Higher incidence of co-morbidities such as post-traumatic stress disorder (PTSD), depression, other psychiatric conditions, and substance and alcohol abuse
- Complications related to smoking habits may be a more serious immediate risk than HIV disease itself
- Culture of smoking higher in the military and among Veterans

## SCOPE OF THE PROBLEM

### *Impact of Smoking on Morbidity and Mortality*

Smoking is the leading cause of preventable death and disease in the United States.<sup>1,2</sup> It is a chronic disorder that often requires repeated interventions and multiple attempts to quit. For HIV-infected individuals, smoking has an even greater health impact than for smokers in the general population or HIV-infected nonsmokers<sup>3-4</sup>:

- HIV-infected smokers have a greater probability of non-AIDS related diseases such as cardiovascular and pulmonary conditions (pneumothorax, pneumonia, lung cancer) and non-AIDS cancers.<sup>3-7</sup>
- HIV-infected smokers have more AIDS-related illness such as *Pneumocystis jiroveci* pneumonia, tuberculosis, and oral candidiasis.<sup>8-10</sup>
- HIV-infected smokers may have a decreased response to antiretroviral therapy (ART) and more rapid progression to AIDS.<sup>11-12</sup>
- There may be an association between smoking and immunologic and virologic failure.<sup>13</sup>
- Cigarette smoking has been found to be an independent predictor of non-adherence to ART.<sup>14</sup>
- Studies have shown that HIV-infected individuals, including Veterans, who are current smokers have a significantly higher all-cause mortality than those who never smoked.<sup>15-16</sup>

ART has changed the prognosis for HIV-infected individuals from a fatal diagnosis to a manageable chronic illness.<sup>17-18</sup> HIV-infected patients who adhere to ART are less likely to die from AIDS-related illnesses than from non-AIDS-related disease.<sup>18</sup> Efforts to improve the health status and quality of life of individuals living with HIV is one of the highest treatment priorities. Such efforts need to include strategies for effective smoking cessation counseling and treatment.<sup>3,18</sup>

### ***Incidence of Cigarette Smoking in the U.S. HIV-infected Population and HIV-infected Veterans***

Approximately 20% of the general U.S. population over 18 years old is a current smoker.<sup>19</sup> The incidence of HIV-infected current smokers is thought to be much higher:

- HIV-infected individuals are 2-3 times more likely to be smokers than those who do not have the disease, with prevalence of smoking in the general HIV-infected population reported between 40-70%.<sup>20-23</sup>
- The incidence of smoking in HIV-infected Veterans is also high and likely underreported. According to 2010 VHA reports of the 25,000 Veterans with HIV in VA care, 47% have smoked cigarettes at some time and approximately 25% are current smokers. However, self-report surveys indicate that more than 70% of these Veterans have smoked at some time and 46-51% are current smokers. These percentages may be even higher for combat Veterans.<sup>24-27</sup>

## **BENEFITS OF SMOKING CESSATION IN HIV-INFECTED SMOKERS**

Smoking cessation can reduce and reverse many of the well-known negative effects of tobacco use.<sup>28</sup> There are also specific benefits for HIV-infected patients who quit smoking:

- Cigarette smoking is the most important modifiable cardiovascular risk factor among HIV-infected patients, more so even than the use of lipid-lowering drugs or ART.<sup>29</sup>
- The risk of cardiovascular events in HIV-infected patients decreases with increased time since smoking cessation.<sup>30</sup>
- The evaluation of a smoking cessation program at a 3-month follow up found that HIV-related symptom burden decreased as the amount of time without smoking increased.<sup>31</sup>
- Every attempt to quit improves the probability of eventual success.

## Effective Smoking Cessation Strategies

Effective smoking cessation treatments that can significantly increase rates of long-term abstinence have been developed and tested.<sup>1,32</sup> Patient success in quitting and staying smoke-free can be dramatically increased by implementing interventions that:

- Increase patient and staff awareness and education
- Use smoking cessation counseling plus smoking cessation medication
- Use two, rather than one, forms of smoking cessation medication
- Consistently identify (through documentation in the Computerized Patient Record System [CPRS]) and treat smokers
- Integrate smoking cessation into primary care

## THE HIV CARE PROVIDER'S ROLE

HIV care providers have been slow to routinely assess their patients' smoking status and monitor their quit attempts when compared to general primary care providers.<sup>22,33-34</sup> In a study of VA HIV care providers<sup>35</sup> they were:

- Less likely to identify their patients as current smokers
- Had lower confidence in their ability to influence the smoking habits of patients in their care
- Less likely to recognize current smoking in patients who reported dyspnea/cough, or with smoking-related diseases such as chronic obstructive pulmonary disease, coronary artery disease, and bacterial pneumonia

In an informal survey of providers at clinics for HIV-infected Veterans and studies of HIV care providers, it was shown that fewer than 50% of these providers followed the U.S. Department of Health and Human Services' *Treating Tobacco Use and Dependence: 2008 Update* (Clinical Practice Guideline) of providing patients with smoking cessation interventions such as counseling, referring them to a cessation program, or providing them with cessation medications.<sup>22,25,35</sup>

## What We Can Do for HIV-infected Patients Who Smoke

Researchers cite the importance of developing smoking cessation strategies specifically for HIV-infected smokers.<sup>36-38</sup> Studies have shown the efficacy of integrating smoking cessation counseling into primary care and into clinics serving special populations such as those with PTSD and HIV disease.<sup>39-43</sup> HIV

care providers can play a key role in helping their HIV+ patients quit smoking by:

- Recommending quitting, assessing readiness to quit, giving patients information about the risk of smoking and HIV disease and smoking cessation materials and monitoring quit attempts and smoking relapses. Smokers cite a physician's advice to quit as an important motivating factor for attempting to quit.<sup>28</sup>
- Administering two smoking cessation medications in combination with counseling.
- Assisting patients in resolving co-morbidities that may hinder their ability to quit smoking.
- Making referrals to specialists (e.g., mental health and substance abuse treatment providers, social workers) as needed.
- Re-prescribing smoking cessation medications after relapse.

## CHALLENGES TO CESSATION IN HIV-INFECTED SMOKERS

HIV-infected individuals who smoke have a higher incidence of co-morbidities such as PTSD, depression and other psychiatric conditions, as well as substance and alcohol abuse.<sup>44-49</sup> Some providers are hesitant to attempt smoking cessation in patients with serious co-morbidities, while others and some HIV-infected smokers have misconceptions about the impact of light smoking in those with HIV disease. Several studies suggest that smoking cessation is possible in populations with serious co-morbidities, including HIV-infected individuals.

- For Veterans with PTSD who smoke, an integrated model of smoking cessation with primary care providers and staff that provided consistent care was found to be effective and superior to standard-of-care smoking cessation programs given separately from the primary care clinic.<sup>40,42</sup>
- Studies in populations with psychiatric disorders and depression suggest at least moderate efficacy of smoking cessation and little evidence of exacerbation of these disorders.<sup>50-51</sup>
- Approximately half of alcohol dependent individuals are daily smokers and a number of studies have evaluated concurrent treatment of nicotine dependence and alcohol use disorders.<sup>52</sup> Overall, evidence indicates that smoking cessation interventions for individuals with alcohol use disorders are effective and have no detrimental effects on abstinence from alcohol.<sup>53</sup> Study results are

mixed regarding optimal timing of smoking cessation interventions for alcohol use disordered individuals.<sup>54-55</sup> Smoking status should be addressed for all individuals with alcohol use disorders and the following recommendations have been proposed:<sup>52,56</sup>

- Smoking cessation interventions should be offered to all alcohol use disorder patients who smoke
  - A menu of options about how and when to stop should be offered
  - Timing of smoking cessation interventions (concurrent versus delayed) should be based on patient preference
- 
- HIV-infected patients and their providers should know that the complications of their smoking habit may be a more serious risk to them than their HIV disease especially if patients are compliant with ART and otherwise well.
  - Light smoking is dangerous to the health of those who smoke. The Surgeon General's report on how tobacco causes diseases documents in great detail how both direct smoking and secondhand smoke causes damage not only to the lungs and heart, but to every part of the body.<sup>57</sup> Researchers found that inhaling cigarette smoke from one cigarette causes immediate changes to the lining of blood vessels and that light smoking may be almost as detrimental as heavy smoking.

Though the Department of Defense and the VA Veterans Health Administration have worked hard to reduce tobacco use, smoking remains widespread and deeply rooted in military culture and among Veterans.<sup>58</sup> In one study, HIV-infected Veterans who smoked were shown to socialize with other smokers to a greater extent than with non-smokers.<sup>25</sup> Smoking cessation strategies need to continue to focus on changing the culture of smoking and find alternative and more positive forms of social interactions for Veterans that exclude tobacco use.



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## **II. Smoking Cessation Interventions**





## CHAPTER SUMMARY

**Effectiveness of smoking cessation interventions**

- Effective interventions can be brief (3-5 minutes) or intensive (lasting for >10 minutes)
- Brief 3-minute interventions advising patients to quit can enhance abstinence rates
- Even without a smoking cessation program, brief counseling and medications provided as part of ongoing health care can be effective

**Starting a smoking cessation program for HIV-infected Veterans**

- Identify HIV care providers and key staff with an interest in smoking cessation
- Start small and manageable by selecting brief interventions appropriate for the setting
- Build the program by incorporating more intensive interventions when appropriate
- Monitor and track your patients' progress

**EFFECTIVENESS OF SMOKING CESSATION INTERVENTIONS**

Smoking cessation interventions can be extremely effective and providers who perform even brief interventions of advice to quit can significantly enhance abstinence rates. Care providers should present a clear, concise, and consistent “quit” message to all their patients who smoke. The evidence on smoking cessation interventions referenced below is presented in full in the U.S. Department of Health and Human Services (DHHS), Public Health Service (PHS), *Treating Tobacco Use and Dependence: 2008 Update* (Clinical Practice Guideline).<sup>1</sup>

Any type of provider can be effective at increasing quit rates. Strong evidence suggests that the more intense the cessation intervention, the greater the rate of abstinence. Intervention intensity can be increased by extending the length and number of individual treatment sessions.<sup>1</sup> Cessation counseling lasting between 4-30 minutes can double a patient's chance of abstinence whereas counseling lasting more than 30 minutes can triple a patient's chance of success.<sup>1</sup> Conducting 2-3 counseling sessions increases abstinence rates by 1.5 fold while conducting 4-8 sessions double the chances of success.<sup>1</sup>

Self-help, pro-active group counseling and telephone counseling have all been shown to significantly increase abstinence rates compared to stopping “cold turkey.”<sup>1</sup> It is important to remember that brief counseling and medications provided as part of an ongoing therapeutic relationship can be as or more effective than a referral to an outside clinic smoking cessation program or the prescribing of medication alone.

## STARTING A SMOKING CESSATION PROGRAM FOR HIV-INFECTED VETERANS

Implementing a sustainable and effective smoking cessation program can feel daunting, but several key strategies can be helpful when implementing an effective smoking cessation program in your HIV clinic.

As you start to build a program in your clinic, identify providers and staff who are interested in smoking cessation as these “local champions” can help build momentum for the program and get other providers involved. As more providers become interested, you can start to implement more intensive cessation interventions. Monitoring and tracking patients’ progress over time can provide helpful feedback to staff so they can see the impact of their work.

Finally, there is a smoking cessation lead clinician at each VA facility who can be a valuable resource for your clinic. Please email [publichealth@va.gov](mailto:publichealth@va.gov) to obtain the name of this clinician at your VA facility.

## SMOKING CESSATION BEHAVIORAL INTERVENTIONS

Listed in this chapter are interventions you can use when talking with your patients about their interest in smoking cessation. These brief and intensive interventions have been used for smoking cessation in health care settings and range from 3-10 minute conversations, to intensive counseling that can last an hour. Also addressed are challenges and opportunities for implementing these well-established interventions with your HIV-infected patients and making smoking cessation a routine part of the clinical care you provide.

### ***Brief Interventions (3-10 minutes)***

The most important factor in smoking cessation is engaging patients. Providing patients with information about the impact of smoking in the context of HIV/AIDS, assessing their level of motivation to quit, and helping them move to the next step in cessation through the provision of resources or referrals to smoking cessation programs, are critical components of brief interventions. Below the five elements of a brief smoking cessation intervention are outlined.

**TABLE 1. THE 5 A'S OF BRIEF SMOKING CESSATION INTERVENTIONS<sup>1-3</sup>**

**ASK about smoking\***

Ask patients about smoking at every clinic visit

- If a patient has never used, you do not need to ask again
- If a patient quit years ago, congratulate and check in periodically

*\*Clinical reminders and performance measures within VHA can assist with this intervention*

**ADVISE patient to quit**

Provide clear, strong, and personalized suggestions

- **Clear:** *I think it is important that you quit smoking. I can help.*
- **Strong:** *Quitting smoking is one of the most important things you can do to protect your health.*
- **Personalized:** Associate smoking with something that is important to the patient, such as the increased risk of harm with HIV, exposure of children/pets to tobacco smoke, the expense of cigarettes, or pulmonary and cardiovascular comorbidities.
  - *Your smoking habit may be a more serious risk to your health right now than your HIV disease.*
  - *Remember the time you had that terrible pneumonia?*
  - *Do you realize that you can save more than \$2,000 a year on cigarette expenses if you quit?*

**ASSESS readiness to quit**

Assess patient's readiness to quit within the next 30 days

- *Are you willing to give quitting a try in the next 30 days?*
  - If patient is ready, assist patient using the follow-up activities in the ARRANGE section (p. 20).
  - If the patient is not ready to quit, consider using motivational interviewing to increase their readiness (see *Table 2. Enhancing Motivation to Quit Tobacco* (p. 21)).

**ASSIST patients with their quit attempt**

Prepare your patient for quitting (STAR)

- Set a target quit date (TQD). Ideally, the TQD should be within two weeks, but no later than within 30 days. The TQD should be a date

the patient feels comfortable with and gives them enough time to prepare.

- Tell family, friends, and coworkers about quitting, and request understanding and support.
- Anticipate challenges to the upcoming quit attempt, particularly during the critical first few weeks. These include nicotine withdrawal symptoms.
- Remove tobacco products from the environment. Before quitting, avoid smoking in places where a lot of time is spent (e.g., work, home, car). Make your home smoke free.

### Offer pharmacotherapy

### Provide practical counseling (problem-solving/skills training)

- Offer intensive treatment options (e.g., smoking cessation classes, telephone counseling) available within your VA facility.

### Provide intra-treatment social support

- Provide a supportive clinical environment while encouraging the patient in his or her quit attempt.

### Provide supplementary materials and other resources to keep patient motivated and engaged

## **ARRANGE** follow-up encounters

Arrange patient follow-up contact by phone or in clinic (enroll patient in a VHA-based smoking cessation clinic, if s/he requests)

- Timing
  - The first follow-up encounter should be around the TQD or within the first week
  - The second follow-up encounter should be within the first month of the TQD
- Actions to take during follow-up encounters
  - Assess medication use and any adverse reactions
  - Remind patient of reasons for quitting and other resources available to them
  - Congratulate patient on abstinence
- Provide supplementary materials and other resources such as

the *My Smoking Cessation Workbook* to keep patient motivated and engaged

For providers with less time or comfort, the 5 A's can be modified to **AAR**: **Ask** → **Advise** → **Refer**, where the patient is referred to existing smoking cessation services.

### *Intensive Intervention (>10 minutes)*<sup>1</sup>

The components of an intensive smoking cessation intervention consist of:

- Determining whether smokers are willing to make a quit attempt with intensive counseling
- Conducting patient assessments that may be helpful including lung function, stress level, and the Fagerström Test for Nicotine Dependence (See *Table 3. Fagerström Test for Nicotine Dependence* on p. 28)
- When possible, conducting sessions longer than 10 minutes and including ≥ 4 sessions
- Combining behavioral counseling and medication (essential to successful smoking cessation treatment)
- Including problem solving/skills training and intra-treatment social support as part of the intervention

For sample programs and examples of intensive smoking cessation counseling, please see *Appendix A*.

## IDENTIFYING REASONS TO QUIT

It is important to help patients identify reasons for quitting. The following intervention, based on motivational interviewing, can help motivate patients to quit who are not quite ready.

**TABLE 2. ENHANCING MOTIVATION TO QUIT TOBACCO**<sup>3-6</sup>

### **RELEVANCE** Explain why cessation is personally relevant

- Health concerns and patient's disease status or risk
- Family situation, such as quitting for children
- Monetary cost of nicotine dependence

**RISKS** Ask patients to explain their perceived potential risks of smoking; discuss these risks (e.g., infertility, fetal harm, CV and pulmonary disease, malignancies, harms of secondhand smoke to others) and HIV-specific risks such as:

- HIV-infected smokers may have a decreased response to ART and a more rapid progression to AIDS
- Smoking cigarettes can make it harder to fight off HIV-related infections
- Overall mortality (death rate) is increased in HIV-infected patients who smoke
- Women with HIV who smoke have a greater risk of contracting human papillomavirus (HPV), which can cause cancer of the cervix
- For a smoker with the co-morbid conditions of HIV and Hepatitis C, the liver can be seriously harmed
- Smoking is a common cause of sexual dysfunction

**REWARDS** Ask patients to explain what they might gain from smoking cessation and highlight the rewards most relevant to the patient, including those that are HIV specific

- Better chance of avoiding HIV-related infections
- Better chance of responding to ART
- Improved taste of food
- Improved sense of smell
- Saving money
- Setting a good example for children
- Better performance of physical activities
- Improved appearance (e.g., reduced wrinkling, whiter teeth)
- Lowered risk of heart disease

Explain that:

- 20 minutes after quitting, heart rate and blood pressure drop
- Two weeks to three months after quitting, circulation and lung function improve by 30%
- One year after quitting, risk of coronary heart disease (CHD) is reduced by 50%

- Five years after quitting, stroke risk is similar to that of someone who never smoked

**ROADBLOCKS** Ask patients to identify barriers to quitting and offer options to address those barriers

- Withdrawal symptoms
- Fear of failure
- Weight gain
- Lack of support
- Depression
- Enjoyment of smoking
- Socializing with other smokers

**REPETITION** Discuss the 5 R issues listed above with patients at each visit

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### **III. Real-time Scripts for Brief Smoking Cessation Interventions**



## CHAPTER SUMMARY

### How to approach your patients about smoking cessation

- Smoking can be a chronic, relapsing condition
- Consider tracking smoking as a vital sign
- Administer the Fagerström Test for Nicotine Dependence

### Address patient concerns

- Provide factual information to address each concern

### Sample scripts for brief interventions

- Assess smoking status
- Advise patients about quitting
- Assess readiness to quit
- Encourage confidence in quitting

## APPROACHING YOUR PATIENTS ABOUT SMOKING CESSATION

Though HIV care providers are in excellent position to provide smoking cessation interventions with their patients who smoke, it can be difficult and sometimes uncomfortable to approach the topic. We recommend treating smoking as a vital sign so that a patient's smoking status is readily apparent upon their entrance into the exam room. This is an easy way to encourage you and your patient to integrate conversations about cigarette smoking into your clinic visit. Smoking can be a chronic, relapsing condition that at times requires varying levels of intervention. We encourage you to go as far as you can with each patient at each visit as you help lay the groundwork for smoking cessation.

In order to assess your patient's level of nicotine dependence, we suggest using the test in [Table 3. Fagerström Test for Nicotine Dependence](#) (p. 28). The level of your patient's nicotine dependence has important indications for the regimen that should be suggested for treatment.

**TABLE 3. FAGERSTRÖM TEST FOR NICOTINE DEPENDENCE<sup>1-2</sup>**

**1. How soon after you wake up do you smoke your first cigarette?**

Within 5 minutes (3 pts.); 6-30 minutes (2 pts.); 31-60 minutes (1 pt.);  
After 60 minutes (0 pts.)

**2. Do you find it difficult to refrain from smoking in the places where it is forbidden (e.g., church, library, cinema)?**

Yes (1 pt.); No (0 pts.)

**3. Which cigarette would you hate most to give up?**

The first one in the morning (1 pt.); Any other (0 pts.)

**4. How many cigarettes a day do you smoke?**

10 or less (0 pts.); 11-20 (1 pt.); 21-30 (2 pts.); 31 or more (3 pts.)

**5. Do you smoke more frequently during the first hours after waking than during the rest of the day?**

Yes (1 pt.); No (0 pts.)

**6. Do you smoke if you are so ill that you are in bed most of the day?**

Yes (1 pt.); No (0 pts.)

**NICOTINE DEPENDENCE SCORE (Points):**

(0-2 pts.) Very low dependence

(3-4 pts.) Low dependence

(5 pts.) Medium dependence

(6-7 pts.) High dependence

(8-10 pts.) Very high dependence

*Note.* Adapted with permission from “The Fagerström Test for Nicotine Dependence: a revision of the Fagerström Tolerance Questionnaire,” by T. F. Heatherton, L. T. Kozlowski, R. C. Frecker & K. O. Fagerström, 1991, *British Journal of Addiction*, 86(9), 1119-1127. Copyrighted.

## ADDRESSING PATIENT CONCERNS

In the following tables, you will find helpful methods for discussing cigarette smoking and smoking cessation with your patients. For a complete step-by-step guide, please consult *Appendix A*.

**TABLE 4. SAMPLE RESPONSES TO PATIENTS' CONCERNS ABOUT SMOKING CESSATION<sup>3-5</sup>**

Patient	Provider
I don't want counseling, I only want medication.	<ul style="list-style-type: none"> <li>■ Counseling + medication works better than medication alone.</li> <li>■ Counseling will provide you with practical skills to support the behavior changes necessary to quit.</li> </ul>
I want to try acupuncture, hypnosis, or laser therapy.	<ul style="list-style-type: none"> <li>■ Reinforce that evidence supporting the effectiveness of counseling + medication.</li> <li>■ Suggest that the patient augment any substandard therapy with counseling + medication.</li> </ul>
I am concerned that I will gain weight once I quit smoking.	<ul style="list-style-type: none"> <li>■ Start to increase physical activity as soon as possible.</li> <li>■ Consider taking a walk instead of a cigarette break.</li> </ul>
I don't understand how nicotine replacement therapies (NRTs) could be harmless if nicotine is also one of the harmful drugs in cigarettes.	<ul style="list-style-type: none"> <li>■ Studies have shown that medicinal nicotine is safe.</li> <li>■ What is harmful in cigarettes are the 4,000 other chemicals, including 40 carcinogens.</li> <li>■ Medicinal nicotine in dosages approved for NRT medications are proven to greatly reduce withdrawal symptoms during smoking cessation.</li> </ul>

Patient	Provider
<p><b>My life is too stressful to quit smoking.</b></p>	<ul style="list-style-type: none"> <li>■ Smoking is one way that many people deal with stress.</li> <li>■ Counseling will help you develop new and healthier ways to cope with your stress.</li> </ul>
<p><b>I have been smoking for 30 years and I have no health problems. Plus, my grandmother smoked all her life and she lived to be 100.</b></p>	<ul style="list-style-type: none"> <li>■ Some people who smoke do not develop health consequences, however about 50% of people who smoke will die from cigarette-related consequences.</li> <li>■ The average smoker lives 10 years less than a non-smoker.</li> </ul>
<p><b>I am HIV-positive; my life is hard enough.</b></p> <ul style="list-style-type: none"> <li>■ <i>Between all my medications and feeling alone, cigarettes are the high point of my day.</i></li> <li>■ <i>I am going to die soon anyway, so why quit now?</i></li> </ul>	<ul style="list-style-type: none"> <li>■ Smoking is even more dangerous for HIV-infected people, as it can be responsible for increasing the chances of AIDS-related infections and cancers. Smoking can also prevent your HIV medications from working as well to fight your HIV-infection and keeping your immune system strong.</li> <li>■ Thanks to ART, HIV-infected people now can live as long as HIV-negative people. You are jeopardizing your health and long life by smoking cigarettes.</li> </ul>

**TABLE 5. SAMPLE SCRIPTS FOR BRIEF SMOKING CESSATION CONVERSATIONS BETWEEN PATIENTS AND PROVIDERS<sup>3-5</sup>**

Questions and statements are all in the voice of the provider.

**Approach your patients about smoking**

**Assess smoking status**

- How many cigarettes do you smoke a day?
- Do others in your household or work environment smoke?
- Have you thought about quitting?

**Advise patient about quitting smoking**

**Be clear**

- I think it is important that you quit smoking. I can help.

**Make strong statements**

- Quitting smoking is one of the most important things you can do for your health.
- Smoking is much more likely to kill you than your HIV.

**Personalize your feedback**

- Your smoking habit may be a more serious risk to your health right now than your HIV disease.
- You can save more than \$2,000 a year on cigarette expenses if you quit.
- All your hard work with your HIV medications is being undone by smoking.
- Your risk of lung disease, CHD, and other problems are much higher.
- You are at increased risk of developing AIDS and other health problems when you smoke.
- The overall mortality for people with HIV who smoke is much higher than for people with HIV who are non-smokers.
- You complain of shortness of breath; giving up cigarettes will improve your breathing and stamina.

**Assess patient's readiness to quit**

- Are you willing to give quitting a try in the next 30 days?
- Lets get specific, how much do you want to cut back by the next time I see you?

### Assess and build motivation

- How confident do you feel (on a scale of 1-10) that you can do that? What would move that number further up the scale for you?
- What would have to happen for it to become much more important for you to change?
- I believe you can do this. It's a tough thing to give up. Let's think about what some of the main barriers are that might get in the way of you being able to do this.

### Support self-efficacy

- So, getting support from your non-smoking friends was a helpful strategy last time you quit.
- You've been really successful in managing HIV medication regimens and you can use some of those same skills here.
- Would you like some resources about smoking cessation that you can read on your own time while you decide?

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### Encouraging confidence in quitting smoking

- On a 10-point scale, how confident are you in your ability to stop smoking for good?
- What would make you more confident in your ability to stop smoking?
- What did you learn from your past quit attempts?
- How might your past relapses be able to help you with this new attempt?
- Is there anything you found helpful in previous attempts to stop smoking?

### Emphasize personal choice and responsibility

- It is up to you to decide when you're ready and how to quit. I'm here to help you whenever you're ready.
- It sounds like you're not ready to think about quitting. It's one of the things we consider like a vital sign so I'll be asking about it when you come in. Just let me know when you feel ready to make a change.
- You're interested in quitting, that's an important step. Here's what we have available to help you (e.g., services, medications). What would you be interested in trying first?
- If you would like, I can tell you some strategies that will help you



address those concerns.

### Expressing empathy

- Lots of people worry about how they'll be able to manage without cigarettes.
- Sounds like you're not ready to quit today, I know this is a tough decision. I'm here to help you whenever you decide you're ready to quit or start to cut down.

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## **IV. Medications for Smoking Cessation**



## CHAPTER SUMMARY

### Nicotine pharmacology

- Use of medications for smoking cessation result in better abstinence rates and durability than quitting “cold turkey”
- Medications for smoking cessation are most successful when combined with other interventions (e.g., counseling, monitoring and tracking)
- Use [Table 3. Fagerström Test for Nicotine Dependence](#) (p. 28) to guide prescribing
- The goal of titration is to eliminate the need for NRT while maintaining smoking abstinence
- Nicotine pharmacology considers the dose response and manages withdrawal symptoms, which commonly include irritability, impatience, anxiety, difficulty concentrating, restlessness, hunger, depression, insomnia, and cravings
- Selection of the smoking cessation medication should be based on the person’s level of addiction to tobacco, product preference, and concomitant medical conditions
- Consider combination therapy in patients with high dependence, those who are heavier smokers, or those experiencing cravings or withdrawal symptoms while on the patch alone

### Nicotine replacement therapy (NRT)

- Nicotine transdermal patch
- Nicotine polacrilex gum
- Nicotine polacrilex lozenge
- Nicotine nasal spray\*
- Nicotine oral vapor inhaler\*
- Consider combination therapy of nicotine patch plus polacrilex gum or lozenge for maximum management of withdrawal symptoms

### Non-NRT agents

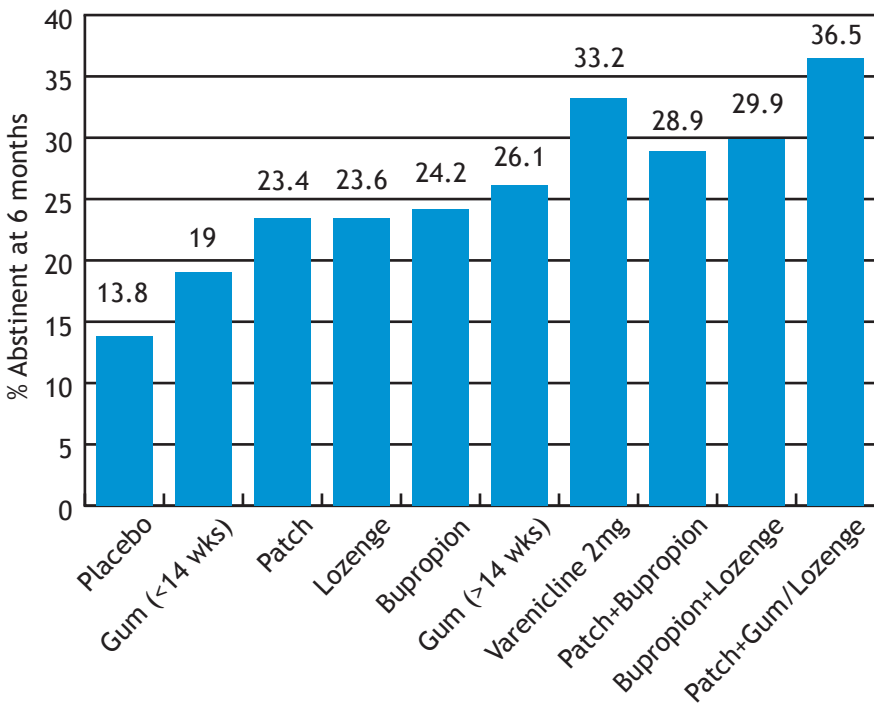
- Bupropion
  - Levels of bupropion may be reduced when patient takes ritonavir or efavirenz
- Varenicline (second-line agent within VA)

*\*Not on VA national formulary*

## NICOTINE PHARMACOLOGY

First-line agents approved for smoking cessation consist of NRT including the nicotine patch, gum, lozenge, inhaler and spray; and the non-NRT agent bupropion. Within VA, varenicline is a second-line agent for smoking cessation. Combination therapy using the nicotine patch plus either gum, lozenge, inhaler, or bupropion is also recommended as a first-line treatment option. It is important to note that neither NRTs nor varenicline interact with ART, however, bupropion levels may be reduced when prescribed in patients receiving ritonavir, lopinavir/ritonavir, efavirenz, and/or tipranavir.

**FIGURE 1. EFFICACY OF MEDICATIONS FOR SMOKING CESSATION**<sup>6,9,12-13</sup>



### Nicotine Withdrawal<sup>3</sup>

Once absorbed, nicotine induces a variety of central nervous system, cardiovascular, and metabolic effects.<sup>1-3</sup> Within seconds after inhalation, nicotine reaches the brain and stimulates the release of various neurotransmitters including dopamine, which induces nearly immediate feelings of pleasure and relieves nicotine-withdrawal symptoms. This rapid dose response

reinforces the need to repeat the intake of nicotine, thereby perpetuating smoking behavior.

When nicotine is discontinued, individuals may develop withdrawal symptoms such as irritability, impatience, anxiety, difficulty concentrating, restlessness, hunger, depression, insomnia, and cravings.

Most physical withdrawal symptoms generally manifest within 24-48 hours after quitting and gradually dissipate over 2-4 weeks; however, strong cravings for cigarettes can persist for months or even years.

## NICOTINE REPLACEMENT THERAPY (NRT)

The mechanism of action of these agents, which are ganglionic (nicotinic) cholinergic-receptor agonists, is to replace nicotine that would have been obtained from smoking.<sup>3</sup> These agents improve quit rates by reducing the symptoms of nicotine withdrawal and because the onset of action with NRT is not as rapid as that of nicotine obtained through a cigarette, patients become less accustomed to the nearly immediate reinforcing effects of tobacco.<sup>4</sup> The goal is to use NRT to assist to titrate off a patient's nicotine addiction over a few months. All NRTs are contraindicated in patients with a hypersensitivity to nicotine or components and all agents have the potential for nicotine overdose. *Table 6. Medications for Smoking Cessation Available Through the VA National Formulary* summarizes the dosing regimens, advantages and disadvantages, common adverse effects, and contraindications for three forms of NRT, bupropion, and varenicline.

### *Nicotine transdermal patch*<sup>4-6</sup>

- Although the patch has the slowest onset of all the nicotine preparations, it offers more consistent levels of nicotine over a sustained period of time resulting in fewer blood level fluctuations. Plasma nicotine concentrations rise slowly over 1-4 hours and peak within 3-12 hours.
- Steady-state concentration is reached 2-3 days after placement of first patch; following removal of the transdermal patch, the apparent half-life averages 3-6 hours. Plasma nicotine levels are about 50% lower than those achieved with cigarette smoking but still alleviate symptoms of withdrawal.
- Can be applied anywhere on the upper body, including arms and back, avoiding hairy areas; rotate the patch site each time a new patch is applied.

- Available OTC in the community without a prescription; advise patients not to combine products obtained in the community with products dispensed from VA without discussing with their providers.

#### *Nicotine polacrilex gum*<sup>6-9</sup>

- Resin complex of nicotine and polacrilin in a sugarfree chewing gum base. Gum has a distinct peppery taste and contains sodium carbonate/bicarbonate buffers to increase salivary pH thereby enhancing absorption of nicotine across the buccal mucosa. The amount of nicotine absorbed from each piece is variable (approximately 1.1 mg and 2.9 mg from the 2mg and 4mg formulations, respectively).
- Nicotine plasma levels peak approximately 30 minutes after chewing a piece of gum and slowly decline over 2-3 hours. Provides plasma nicotine concentrations approximately 30-64% of pre-cessation levels.
- Allows smokers to take an active coping response to nicotine withdrawal symptoms.
- Associated with less weight gain compared to placebo during treatment.
- Sticks to dentures, may dislodge fillings and inlays because of its density.
- Patients should be advised not to eat or drink for 15 minutes before, during or after using. Acidic beverages (e.g., coffee, juice) inhibit the absorption of nicotine and should be avoided within 15-20 minutes of use.
- Available OTC in the community; advise patients not to combine products obtained in the community with products dispensed from VA without discussing with their providers.

#### *Nicotine polacrilex lozenge*<sup>4,6-9</sup>

- Resin complex of nicotine and polacrilin in a flavored lozenge intended to be sucked and moved from side to side in the mouth until fully dissolved. Lozenge contains sodium carbonate/potassium bicarbonate buffers to increase salivary pH thereby enhancing absorption of nicotine across the buccal mucosa.
- Nicotine plasma levels peak in approximately 30 minutes and slowly decline over 2-3 hours. Because the lozenge dissolves completely, it



delivers about 25% more nicotine than does an equivalent dose of nicotine gum.

- Allows smokers to take an active coping response to nicotine withdrawal symptoms.
- Potential to consume too quickly may cause symptoms of high nicotine levels (e.g., nausea or gastrointestinal upset).
- Patients should be advised not to eat or drink for 15 minutes before, during or after using. Acidic beverages (e.g., coffee, juice) inhibit the absorption of nicotine and should be avoided within 15-20 minutes of use.
- Available OTC in the community; advise patients not to combine products obtained in the community with products dispensed from VA without discussing with their providers.

#### **Nicotine nasal spray**<sup>6-10</sup> (not on VA national formulary)

- Aqueous solution of nicotine available in a metered-spray pump for administration to nasal mucosa. Each actuation delivers a 50 mcL spray containing 0.5 mg of nicotine.
- Peak concentrations occur more rapidly than with other NRT products; plasma levels peak within 5-15 minutes resembling the kinetics of nicotine seen with cigarette use; approximately 53% is absorbed.
- Due to its faster onset, capacity for self-titration, and rapid fluctuations of nicotine levels, the nasal spray has the highest potential for developing dependence.
- Local irritant adverse effects including nasal and throat irritation, runny nose, sneezing, watery eyes, and cough may occur. These effects frequently dissipate after the first week of use.
- Not recommended for patients with known chronic nasal disorders or severe reactive airway disease.

#### **Nicotine oral inhaler**<sup>6-9,11</sup> (not on VA national formulary)

- Consists of a plastic mouthpiece and cartridge that delivers nicotine as an inhaled vapor from a porous plug containing nicotine. When puffed, nicotine is vaporized and absorbed across the mucosa of the mouth and throat (not the lungs).

- Each foil sealed cartridge contains 10mg of nicotine and 1mg of menthol. Plastic spikes on the mouthpiece pierce the foil allowing the release of 4mg of nicotine vapor following intensive inhalation of which about 2mg is absorbed.
- Peak plasma concentrations occur within 15-30 minutes and then slowly decline.
- High residual level of nicotine in discarded cartridge can be dangerous to children and pets.
- High incidence of mouth and throat irritation.
- Use cautiously in patients with severe reactive airway disease.
- Delivery of nicotine from the inhaler declines significantly at temperatures below 40°F.
- Patients should be advised not to eat or drink for 15 minutes before, during or after using. Acidic beverages (e.g., coffee, juice) inhibit the absorption of nicotine and should be avoided within 15-20 minutes of use.

*Please note the nicotine oral inhaler is not the same as electronic cigarettes, which are not FDA approved for smoking cessation treatment.*

### **Combination Nicotine Replacement Therapy**<sup>6,9,12-13</sup>

Combination NRT involves the use of a long-acting formulation (e.g., nicotine patch) along with a short-acting formulation (e.g., gum, lozenge, inhaler, or nasal spray). A nicotine patch provides a passive sustained form of nicotine delivery and is used to prevent the onset of severe withdrawal symptoms.

Short-acting formulations provide an ad libitum delivery that has a faster onset and can be used to control the strong cravings or urges that occur during potential relapse situations (e.g., after meals, during times of stress, when around other smokers).

Controlled trials suggest that the nicotine patch in combination with short-acting NRT formulations significantly increases quit rates relative to placebo and nicotine patch alone. Combination therapy with the patch and either gum or lozenge is superior to monotherapy with the patch in up to one year of follow up. Using a combination of patch plus long-term nicotine gum (>14 weeks) has been shown to more than triple the likelihood of long-term abstinence (OR = 3.6, 95% CI 2.5-5.2). Similarly, studies evaluating the nicotine

patch in combination with the nicotine lozenge for 12 weeks have resulted in abstinence rates of up to 40% at six months.

### Example Titration Schedule

- ▶ Week 1: Nicotine 21mg patches and 5 lozenges
- ▶ Week 2: Nicotine 21mg patches and 4 lozenges
- ▶ Week 3: Nicotine 21mg patches and 3 lozenges
- ▶ Week 4: Nicotine 21mg patches and 2 lozenges
- ▶ Week 5: Nicotine 21mg patches and 1 lozenge
- ▶ Week 6: Nicotine 14mg patches and 4 lozenges
- ▶ Week 7: Nicotine 14mg patches and 3 lozenges
- ▶ And so forth...

**\*\*Use behavioral strategies previously listed to assist with titration\*\***

### **NRT Safety**<sup>6,9,14-16</sup>

Nicotine can increase one's heart rate, blood pressure, and myocardial contractility, and also act as a coronary vasoconstrictor. In patients with stable coronary artery disease, NRT can be initiated at intermediate doses with careful monitoring. Large randomized trials have found no significant increase in the incidence of cardiovascular events or mortality among patients with cardiovascular disease receiving NRT when compared to placebo. A large observational study of more than 33,000 patients found that NRT use was not associated with an increased risk of myocardial infarction, stroke, or death. Serum concentrations of nicotine achieved with the recommended dosages of NRT are generally much lower than those attained with smoking and most experts agree that the risks associated with NRT use in patients with cardiovascular disease are minimal relative to the risks of continued smoking.

Other conditions for which NRT should be used with caution include active temporomandibular joint (TMJ) disease (specifically, NRT gum), hyperthyroidism, peptic ulcer disease, and severe renal impairment. Although the FDA has developed a uniform warning for all NRTs because of the risks of nicotine in pregnancy, they believe that NRT is safer than smoking during pregnancy.

The safety of NRT in the elderly has not been systematically evaluated. However, one small pharmacokinetic study concluded that though there were statistically significant differences, the disposition of nicotine does not seem to be changed to a clinically important extent in the elderly compared to younger subjects.

## NRT Use<sup>6</sup>

Treatment of nicotine dependence with NRT should adhere to the following principles:

- **Dose to effect:** The initial dose should be sufficient to provide the patient with a nicotine dose similar to that seen prior to stopping cigarettes. Providers should always assess the patient's nicotine dependence before prescribing cessation aids.  
(See [Table 3. Fagerström Test for Nicotine Dependence](#) on p. 28)
- **Treat withdrawal symptoms:** The nicotine replacement dose should be sufficient to prevent or minimize craving for tobacco products.
- **Avoid adverse reactions:** The nicotine replacement dose should be titrated so that signs and symptoms of overmedication (e.g., headache, nausea, palpitations) do not occur.
- **Advise patient not to use cigarettes while using NRT:** Encourage the patient to report to their provider if they have severe cravings, which may indicate reevaluation of dosage and type of NRT (consider use of combination NRT, such as the patch or gum).
- **Selection of the NRT should be based on the person's level of addiction to tobacco, product preference, and concomitant medical conditions:** Consider combination therapy in patients with high dependence or in those who are heavy smokers.

## BUPROPION<sup>6,17-21</sup>

Bupropion (Zyban<sup>®</sup>) is a weak dopamine-norepinephrine reuptake inhibitor with some nicotine receptor blocking activity.<sup>17-18</sup> The mechanism by which bupropion enables patients to abstain from smoking is unknown. However, it is presumed that bupropion acts by enhancing central nervous noradrenergic and dopaminergic release and antagonizes nicotinic acetylcholine receptor function. The antismoking effect of bupropion does not seem to be related to the antidepressant effect, as bupropion is equally effective as a smoking cessation therapy in smokers with or without depression.<sup>19</sup>

- Steady-state levels of bupropion and metabolites are reached within 5-8 days, respectively. It is best to start bupropion one week before one's target quit date.
- In patients with severe hepatic cirrhosis, extreme caution is advised since peak bupropion levels are substantially increased. For patients with mild-to-moderate hepatic cirrhosis, a reduced frequency or dose should be considered.

- Bupropion should be used with caution in patients with renal impairment and a reduced frequency of dosing should be considered. Patients should also be closely monitored for possible adverse effects that could indicate high drug or metabolite effects.
- Bupropion has the potential to interact with other drugs that are metabolized by or which inhibit/induce the CYP2B6 isoenzyme. It can also interact with drugs metabolized by the CYP2D6 isoenzyme.
  - Ritonavir at boosting doses of 100 mg twice daily or in co-formulation with lopinavir (as KALETRA®) can reduce bupropion levels by approximately 20-80%.
  - Other inducers such as carbamazepine, phenobarbital, and phenytoin can lower bupropion levels via induction of bupropion metabolism.
  - Bupropion and hydroxybupropion (one of its metabolites) are inhibitors of CYP2D6 in vitro. Since the interactions between bupropion and drugs metabolized by CYP2D6 have not been formally examined, caution is advised in the coadministration of bupropion with drugs metabolized by CYP2D6. If adding a drug metabolized by CYP2D6 (e.g., nortriptyline, imipramine, desipramine, paroxetine, fluoxetine, sertraline, haloperidol, risperidone, thioridazine, metoprolol, propafenone, flecainide) to a patient already receiving bupropion, consider initiating the coadministered drug at the lower end of the dose range. Conversely, if bupropion is added to a regimen containing a drug metabolized by CYP2D6, consider decreasing the dose of the original medication; especially, for those concomitant medications with a narrow therapeutic index.
  - MAO (monoamine oxidase) inhibitors: Wait 14 days after discontinuing before starting therapy with bupropion.
- Although the recommended duration of treatment is 7-12 weeks, bupropion is approved for use up to six months to prevent relapse to smoking.<sup>20</sup>
- Bupropion may be associated with less weight gain.
- Bupropion may be used in combination with the nicotine patch.<sup>6,21</sup>

### **Bupropion Safety**<sup>22-24</sup>

Bupropion is associated with a dose-dependent risk of seizures; maximum bupropion SR dose for treating smoking is 300 mg/day. Although higher doses of bupropion SR have been used for treating depression, they have not been

tested for smoking cessation. Also, there is no evidence that higher doses improve quit rates.

Extreme caution is advised in patients with severe hepatic cirrhosis; all patients with hepatic impairment should be closely monitored for possible adverse effects. Caution is also advised in patients with a history of hypertension, myocardial infarction, or unstable heart disease due to risk of hypertension.

Serious neuropsychiatric symptoms have been reported in patients taking bupropion for smoking cessation. These symptoms include, but are not limited to, depression, suicidal ideation, and suicide attempt.

## VARENICLINE<sup>25-28</sup>

Varenicline tartrate (CHANTIX®/Champix®) is a partial agonist that binds selectively to the  $\alpha 4\beta 2$  subunit of the nicotinic acetylcholine receptor thereby reducing the symptoms of nicotine withdrawal during abstinence.<sup>25-26</sup> Because of the significantly higher affinity of varenicline for the  $\alpha 4\beta 2$  receptor subunit, it blocks nicotine from binding to the receptor and attenuates the reinforcement and rewarding effects of nicotine.

- Peak concentrations occur within 3-4 hours after oral administration. Steady-state conditions are reached within four days. Varenicline is well absorbed and levels are unaffected by food or time-of-day dosing. However, recommend to patients that they take it after eating and drink eight ounces of water in order to minimize nausea.
- Primarily eliminated via glomerular filtration with active tubular secretion. In subjects with decreased renal function, varenicline exposure increased from 1.5 to 2.7-fold compared with subjects with normal renal function. Varenicline is efficiently removed by hemodialysis.
- Dosage adjustment is necessary for patients with estimated creatinine clearance <30 mL/min.
- No clinically significant drug interactions.
- For patients who have successfully stopped smoking at the end of 12 weeks, an additional 12-week course of treatment (for a total of 24 weeks) may be beneficial in maintaining and increasing the likelihood of long-term abstinence and preventing relapse.<sup>28</sup>

- To date, the safety and efficacy of varenicline in conjunction with NRT or bupropion for smoking cessation has not been studied extensively and is not recommended.

### ***Varenicline for Smoking Cessation in VA***

Within VA, varenicline is a second-line agent for smoking cessation and must be prescribed according to Pharmacy Benefit Management (PBM) criteria, which can be found on the PBM website (<http://vaww.national.cmap.va.gov/PBM/Clinical%20Guidance/Criteria%20For%20Use/Varenicline%20Criteria%20for%20Prescribing.doc>).<sup>29</sup>

### ***Varenicline Safety***<sup>24,30-32</sup>

Varenicline carries a boxed warning about the risk for serious neuropsychiatric symptoms, including changes in behavior, hostility, agitation, depressed mood, suicidal thoughts and behaviors, and attempted suicide. All patients should be monitored closely and advised to stop treatment if any of these symptoms appear.

Health care providers should perform a careful psychiatric history prior to prescribing the drug and avoid use in smokers with a history of suicidal ideation or a current unstable psychiatric condition. Consider a temporary or permanent dose reduction in patients who cannot tolerate the adverse effects of varenicline.

Varenicline may be associated with a small, increased risk of certain cardiovascular adverse events in patients who have cardiovascular disease. Cardiovascular adverse events were infrequent overall, however, certain cardiovascular adverse events were reported in more patients treated with varenicline than patients treated with placebo. The FDA is continuing to evaluate the cardiovascular safety of varenicline.

TABLE 6. MEDICATIONS FOR SMOKING CESSATION AVAILABLE THROUGH THE VA NATIONAL FORMULARY

	BUPROPION	NICOTINE TRANSDERMAL PATCH	NICOTINE POLACRILEX GUM	NICOTINE POLACRILEX LOZENGE	VARENICLINE
Trade name and dose availability	Bupropion SR (Zyban®) 150mg, 300mg tab	Nicoderm®/Habitrol® 7mg, 14mg, 21mg	Nicorette® Gum 2mg, 4mg	Commit® Lozenge 2mg, 4mg	CHANTIX® 0.5mg, 1mg tablet
	Bupropion IR 100mg tab				
Recommended regimen	Bupropion SR 150mg qd x 3d, then 150mg bid (8 hrs apart)  Patients with cirrhosis need adjusted dose: 150mg qod  Bupropion IR 100mg qd x 3d, then 100mg tid  Patients with cirrhosis need adjusted dose: 75mg qd	High dependence* 21mg x 4-6wks, then 14mg x 2wks, then 7mg x 2wks  Low dependence 14mg x 6-8wks, then 7mg x 2wks	High dependence* 4mg q1-2hrs x 6wks, then q2-4hrs x 4wks, then q4-6hrs x 2wks  Low dependence 2mg q1-2hrs x 6wks, then q2-4hrs x 3wks, then q4-6hrs x 3wks  • No more than 24 pieces/24hrs	High dependence* 4mg  Low dependence 2mg  • Suck 1 lozenge q1-2hrs x 6wks, then 1 q2-4hrs x 3wks, then 1 q4-8hrs x 3wks  • No more than 20 lozenges/24hrs or 5 lozenges/6hrs	0.5mg qd day 1-3, then 0.5mg bid day 4-7, then STOP SMOKING on quit date, then 1mg bid for total of 12 weeks duration  CrCl<30: max dose is 0.5mg bid  ESRD or HD: 0.5mg qd
Start instructions	1-2 weeks before quit date	On quit date	On quit date	On quit date	1-2 weeks before quit date
Administration comments	• Continue treatment for 7-12 wks (if no progress is made by week 7, consider discontinuing therapy)	• Usually worn for 16-24 hrs  • Apply from neck to waist	• Chew slowly (about 10 chews) until peppery taste then “park” between teeth and gums until taste dissipates. Repeat	• Dissolve slowly over 20-30 minutes shifting in mouth occasionally  • Do not chew or swallow (increased risk	• Take after eating and with 8 ounces of water to minimize nausea  • Report depression, suicidal ideation,



	BUPROPION	NICOTINE TRANSDERMAL PATCH	NICOTINE POLACRILEX GUM	NICOTINE POLACRILEX LOZENGE	VARENICLINE
<b>Administration comments (cont.)</b>	<ul style="list-style-type: none"> <li>• If insomnia, take PM dose in afternoon</li> <li>• Dose tapering is not required upon discontinuation</li> <li>• Alert patients to potential for drug interactions</li> <li>• Do not crush or chew tablets</li> <li>• <i>Can be used in combination with patch</i></li> </ul>	<ul style="list-style-type: none"> <li>• Rotate sites</li> <li>• Takes 2-3 d for effect after application of first patch</li> <li>• <i>Can be used in combination with gum or lozenge</i> at usual dose. Patch continued for 8-10 weeks with lozenge and 8-24 weeks with gum</li> </ul>	<p>process on and off for 30 mins/piece</p> <ul style="list-style-type: none"> <li>• <i>Can be used in combination with patch</i>; most patients will require 6-8 pieces/day PRN when used in combination. Gum can be continued for 26-52 weeks when initiated as combination therapy</li> </ul>	<p>of GI side effects)</p> <ul style="list-style-type: none"> <li>• Avoid acidic beverages (citrus juice, soft drinks), within 15 minutes of use</li> <li>• <i>Can be used in combination with patch</i>; most patients will require 6-8 pieces/day PRN when used in combination. Lozenge continued for 12 weeks duration when used in combination</li> </ul>	<p>unusual changes in behavior, or worsening of pre-existing psychiatric illness</p> <ul style="list-style-type: none"> <li>• An additional 12 wks of treatment in patients who have successfully stopped smoking may increase the likelihood of long-term abstinence</li> </ul>
<b>ART interactions</b>	Efavirenz, ritonavir, and tipranavir may decrease bupropion levels 40-50%; monitor for depression and titrate to clinical effect	None	None	None	Does not interact with the cytochrome P450 system; no ART interactions identified to date
<b>Advantages (+) and disadvantages (-)</b>	(+) better compliance; ease of use; can be combined with patch; consistent rate of exposure; helps with withdrawal symptoms	(+) best adherence; easy to use; consistent rate of exposure; unobtrusive; can be combined with PRN gum	(+) can titrate to adjust for cravings or sudden urges; oral substitute for cigarettes; can be combined with patch for better efficacy	(+) easy to use; discreet; higher immediate levels; can titrate to adjust for cravings; reduces self-reported withdrawal	(+) better compliance; ease of use; consistent rate of exposure; superior rate of abstinence compared to bupropion and placebo

	BUPROPION	NICOTINE TRANSDERMAL PATCH	NICOTINE POLACRILEX GUM	NICOTINE POLACRILEX LOZENGE	VARENICLINE
<b>Advantages (+) and disadvantages (-) (cont.)</b>	(-) many drug interactions; CNS side effects; must be adjusted for hepatic insufficiency; increased risk of seizures	or lozenge for better efficacy  (-) less effective for cravings; difficult to control titration; absorption increased at elevated temperatures	(-) difficult for those with poor dentition/dentures; must use proper chewing technique; must abstain from drinking/eating during gum use; swallowing the nicotine causes GI side effects	symptoms; can be combined with patch for better efficacy  (-) must abstain from drinking/eating during lozenge use	(-) potential for serious neurologic and psychiatric side effects (esp. in those with underlying psychiatric disease); dose adjust for renal insuf (CrCl<30); high incidence of nausea
<b>Adverse effects</b>	<ul style="list-style-type: none"> <li>• Agitation</li> <li>• Anxiety</li> <li>• Disturbed concentration</li> <li>• Dizziness</li> <li>• Headache</li> <li>• Insomnia</li> <li>• Constipation</li> <li>• Dry mouth</li> <li>• Nausea</li> <li>• Hypersensitivity reactions</li> <li>• Seizures (risk 1:1000)</li> </ul>	<ul style="list-style-type: none"> <li>• Sleep disturbances</li> <li>• Local skin irritation</li> <li>• Bone pain</li> <li>• Headache</li> <li>• Nausea</li> </ul>	<ul style="list-style-type: none"> <li>• Local mouth irritation</li> <li>• Jaw pain</li> <li>• Hiccups</li> <li>• Dyspepsia</li> <li>• Rhinitis</li> <li>• Nausea</li> <li>• Flatulence</li> </ul>	<ul style="list-style-type: none"> <li>• Local mouth irritation/tingling</li> <li>• Heartburn, indigestion, nausea (if chewed)</li> <li>• Headache</li> <li>• Nausea, diarrhea</li> <li>• Flatulence</li> </ul>	<ul style="list-style-type: none"> <li>• Dream disorders</li> <li>• Headache</li> <li>• Insomnia</li> <li>• Abnormal behavior</li> <li>• Agitation</li> <li>• Depressed mood</li> <li>• Suicidal thoughts</li> <li>• Constipation</li> <li>• Flatulence</li> <li>• Nausea and vomiting</li> </ul> <p><i>Consider dose reduction in patients sensitive to adverse effects (e.g., nausea, insomnia)</i></p>

	BUPROPION	NICOTINE TRANSDERMAL PATCH	NICOTINE POLACRILEX GUM	NICOTINE POLACRILEX LOZENGE	VARENICLINE
VA national formulary restrictions	None	None	None	None	Yes, must meet criteria for use.  Criteria available at <a href="http://vaww.national.cmop.va.gov/PBM/Clinical%20Guidance/Criteria%20For%20Use/Varenicline%20Criteria%20for%20Prescribing.doc">http://vaww.national.cmop.va.gov/PBM/Clinical%20Guidance/Criteria%20For%20Use/Varenicline%20Criteria%20for%20Prescribing.doc</a>  Available to patients without active mental health disorders or with clinically stable mental health disorders who have had >1 relapse on NRT or bupropion
Contraindications & relative contraindications	<b>Contraindications:</b> <ul style="list-style-type: none"><li>• History of seizures</li><li>• Predisposition to seizures (i.e., severe head trauma, CNS tumor, hepatic cirrhosis, diabetes treated with insulin or oral hypoglycemics)</li></ul>	<b>Relative Contraindications:</b> <ul style="list-style-type: none"><li>• Hypersensitivity</li><li>• Pregnancy category D</li><li>• Use within 14 days post MI, or serious or worsening angina</li><li>• Patients should be advised not to smoke while on nicotine replacement therapy</li><li>• TMJ syndrome (gum only)</li></ul>	<b>Relative Contraindications:</b> <ul style="list-style-type: none"><li>• Serious neuropsychiatric disorders (including suicidal and homicidal ideation)</li><li>• History of suicidal, homicidal, or</li></ul>		

	BUPROPION	NICOTINE TRANSDERMAL PATCH	NICOTINE POLACRILEX GUM	NICOTINE POLACRILEX LOZENGE	VARENICLINE
Contraindications & relative contraindications (cont.)	<ul style="list-style-type: none"> <li>• Abrupt withdrawal from heavy alcohol use/sedatives</li> <li>• MAO inhibitor within 14 d</li> <li>• Bulimia, anorexia nervosa</li> <li>• Hypersensitivity</li> <li>• Pregnancy category C</li> </ul>				assaultive behavior in the past 12 weeks <ul style="list-style-type: none"> <li>• Untreated or unstable mental disorder (e.g., bipolar, or psychotic disorder, major depressive disorder, PTSD)</li> <li>• Severe renal impairment</li> <li>• Pregnancy category C</li> </ul>
Comments	<ul style="list-style-type: none"> <li>• Use with caution in patients with liver, kidney failure</li> <li>• Avoid in patients on MAO inhibitors</li> <li>• Monitor for neuro-psychiatric signs/symptoms during use</li> </ul>	<ul style="list-style-type: none"> <li>• <i>May be used In combination with nicotine gum or lozenge for significantly better abstinence rates and durability</i></li> <li>• Using the 21 mg patch yields roughly 40-50% the plasma nicotine levels of smoking 1.5 packs per day</li> </ul>	<ul style="list-style-type: none"> <li>• <i>May be used In combination with nicotine patch for significantly better abstinence rates and durability</i></li> <li>• Using 2 mg dose every 1-2 hours yields roughly 40% the plasma nicotine levels of smoking 1 pack per day</li> </ul>	<ul style="list-style-type: none"> <li>• <i>May be used In combination with nicotine patch for significantly better abstinence rates and durability</i></li> <li>• Delivers about 25% more nicotine than does an equivalent dose of nicotine gum</li> </ul>	<ul style="list-style-type: none"> <li>• Should not be used as first-line therapy</li> <li>• Ask about psychiatric history prior to prescribing</li> <li>• Monitor for signs/symptoms of psychiatric illness during use</li> <li>• Monitor serum creatinine; if renal function decreases dose reductions may be necessary</li> </ul>
* High dependence = use of tobacco less than 30 minutes after awakening or greater than or equal to 20 cigarettes (one package) per day. If these criteria do not apply the patient is considered to have low dependence.					

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## **V. Relapse Prevention and Smoking Cessation Maintenance**



## CHAPTER SUMMARY

- Smoking is a chronic, relapsing disorder
- Multiple quit attempts and interventions may be necessary
- Relapse is NOT uncommon
- Continue to address smoking status at every visit and provide ongoing support
- Offer retreatment with medication and counseling
- Provide patients with options for the management of withdrawal symptoms

## SMOKING IS A CHRONIC, RELAPSING DISORDER

Patients who have recently quit smoking are at very high risk for relapse. Relapse is more likely to occur early in the process of quitting, but it can also occur months or years later. While there have been numerous studies attempting to identify strategies or interventions that are effective to prevent relapse, these studies have failed to identify specific interventions that are effective.<sup>1</sup> The most effective strategy to prevent relapse appears to be the provision of evidence-based smoking cessation treatment from the start, including a combination of smoking cessation medications and behavioral counseling, as described in previous chapters.

For patients who have recently quit smoking, continue to provide support at each visit, especially if they express concerns about relapse. Patients should receive reinforcement for their decision to quit, be congratulated on their success at quitting, and be encouraged to remain abstinent. Ask open-ended questions about noticeable benefits they have experienced since quitting. It may be helpful to talk with patients about previous quit attempts and encourage them to plan for how they will cope with challenges to quitting.

Encourage patients to identify their sources of support and if needed, refer them to a counselor or smoking cessation program for additional support. Additional support such as the DoD website *"Quit Tobacco. Make Everyone Proud"* ([www.ucanquit2.org](http://www.ucanquit2.org)) provides online assistance such as a live chat. Additional support can be found in the form of telephone quitlines. It may also be helpful to consider extending the use of smoking cessation medications to help reduce withdrawal symptoms.<sup>1</sup>

## MANAGEMENT OF WITHDRAWAL SYMPTOMS

For patients who relapse, encourage them to describe the challenges they encountered during their quit attempt and recommit to another quit attempt. If needed, also consider referring them to a more intensive smoking cessation treatment program. If the previous quit attempt included medication, review whether the patient used it in an effective manner and determine whether the medication was helpful. Based on this assessment, retreatment can be recommended with either the same medication or with combination NRT.<sup>2</sup>

Those who relapse often report problems that have been worsened by smoking withdrawal. These may include depression, weight gain, or withdrawal symptoms. If a patient reports prolonged cravings or other withdrawal symptoms, consider using combination therapy or extending the use of a short-acting medication (such as the gum or lozenge) to be used on an as-needed basis when acute withdrawal symptoms and urges to use cigarettes occur.<sup>1</sup>

Please refer to the table below for guidance on counseling patients about specific withdrawal symptoms commonly associated with quitting smoking.

**TABLE 7. SMOKING WITHDRAWAL SYMPTOMS\* AND RECOMMENDATIONS**

Withdrawal Symptoms	Recommendation
<ul style="list-style-type: none"> <li>■ Chest tightness (tension created by body's need for nicotine)</li> </ul>	<ul style="list-style-type: none"> <li>■ Practice relaxation techniques</li> <li>■ NRTs</li> </ul>
<ul style="list-style-type: none"> <li>■ Stomach pain</li> <li>■ Constipation</li> <li>■ Gas (decrease of intestinal movement)</li> </ul>	<ul style="list-style-type: none"> <li>■ Drink fluids</li> <li>■ Avoid stress</li> </ul>
<ul style="list-style-type: none"> <li>■ Cravings (nicotine withdrawal/habit)</li> </ul>	<p><b><u>DEADS Strategy</u></b> (Delay, Escape, Avoid, Distract, Substitute)</p> <p><b><u>Delay:</u></b> The most important thing to remember is that an urge will go away if you just give it time. Waiting out an urge, especially if you begin to do</p>

Withdrawal Symptoms	Recommendation
<ul style="list-style-type: none"> <li>■ Cravings (nicotine withdrawal/habit) <i>(cont.)</i></li> </ul>	<p>something else, is easier than you may expect. Believe it or not, the urge will fade after 5 to 10 minutes, even if you do not smoke. It also helps if you have a positive attitude about the urge disappearing. Think "this won't last, the urge will go away," or "I would like a cigarette, but I'm not going to have one, because I don't need one."</p> <p><b>Escape:</b> Another technique for dealing with an urge is to remove yourself from the situation or event which led to the urge. If you're in a room where others are smoking, and an urge hits, get up and take a short walk. You can walk around the building, or outside, until you feel ready to re-enter the situation--without smoking.</p> <p><b>Avoid:</b> Avoiding situations where you'll be tempted to smoke will be particularly important in the first days and weeks after you quit. For example, if you regularly go to places where there's a lot of smoking, like coffee shops or clubs, it's best to avoid them for a little while to allow you to get used to not smoking.</p> <p><b>Distract:</b> Another way to control urges is to get busy, get back to what you were doing before the urge hit. Also, there may be other things you enjoy doing that are incompatible with smoking such as working in the yard, reading a magazine, walking, taking a shower, or working a crossword puzzle.</p> <p><b>Substitute:</b> When you feel that you want a cigarette, substitute something else for a cigarette. We suggest sugarless candy or sugarless gum, especially if you are watching your weight. You could eat a piece of fruit or drink a soft drink. You can also use something to chew on like a straw or a toothpick. The trick is to come up with something you like that can be easily substituted for a cigarette.</p>

Withdrawal Symptoms	Recommendation
<ul style="list-style-type: none"> <li>■ Depressed mood (normal process for a short period)</li> </ul>	<ul style="list-style-type: none"> <li>■ Increase pleasurable activities</li> <li>■ Get support from family/friends</li> <li>■ Discuss with provider</li> </ul>
<ul style="list-style-type: none"> <li>■ Difficulty concentrating (body needs time to adjust to not having constant nicotine stimulation)</li> </ul>	<ul style="list-style-type: none"> <li>■ Avoid stress</li> <li>■ Plan workload accordingly</li> </ul>
<ul style="list-style-type: none"> <li>■ Dizziness (body is getting extra oxygen)</li> </ul>	<ul style="list-style-type: none"> <li>■ Be cautious the first few days</li> </ul>
<ul style="list-style-type: none"> <li>■ Fatigue (lack of stimulation of nicotine)</li> </ul>	<ul style="list-style-type: none"> <li>■ Take naps</li> <li>■ Do not push yourself</li> <li>■ NRTs may help</li> </ul>
<ul style="list-style-type: none"> <li>■ Hunger (cravings for cigarette can be mistaken for hunger)</li> </ul>	<ul style="list-style-type: none"> <li>■ Drink lots of water</li> <li>■ Eat low-calorie snacks</li> </ul>
<ul style="list-style-type: none"> <li>■ Insomnia (nicotine affects brain wave function and sleep patterns)</li> </ul>	<ul style="list-style-type: none"> <li>■ Limit caffeine (reduce by 50%)</li> <li>■ Practice relaxation techniques</li> </ul>
<ul style="list-style-type: none"> <li>■ Irritability (body's craving for nicotine)</li> </ul>	<ul style="list-style-type: none"> <li>■ Exercise</li> <li>■ Practice relaxation techniques</li> <li>■ Take a hot bath</li> </ul>

Withdrawal Symptoms	Recommendation
<ul style="list-style-type: none"><li>■ Stress</li></ul>	<ul style="list-style-type: none"><li>■ Exercise</li><li>■ Practice relaxation techniques</li><li>■ Avoid known stressful situations</li><li>■ Plan workload accordingly</li></ul>
<p><i>*Most withdrawal symptoms go away after a few days to 1-2 months at the most. Cravings/urges are the only symptoms that can return even after one year of smoking cessation.</i></p>	

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# Appendices

Appendix A. Sample Smoking  
Cessation Programs

Appendix B. Evaluating Smoking  
Cessation Programs

Appendix C. Educational  
Materials and  
Additional Resources  
for Patients

Appendix D. Educational  
Materials and  
Additional Resources  
for Providers

Appendix E. FAQs

## Appendix A. Sample Smoking Cessation Programs

### SUMMARY

Research suggests that in selected populations with complex problems and high rates of smoking such as HIV-positive Veterans, an intensive one-on-one integrated model of smoking cessation treatment with primary care providers may be superior to standard smoking cessation programs conducted outside of primary care clinics.<sup>1</sup> In VA HIV clinics, staff sizes range from a full staff of physicians, nurse practitioners, social workers, and support personnel, to one full-time nurse practitioner with part-time physician support. Subsequently, not all clinics can provide the recommended comprehensive program. In light of this reality, below are examples of different levels of intensive smoking cessation counseling programs for implementation depending on staff and time constraints. Programs that consistently identify smokers, raise awareness of the need to quit smoking, and encourage smoking cessation have been shown to increase abstinence. For those clinics that have minimal staff, conducting brief interventions (see Chapter III) and referring patients to a quit group and/or encouraging self-help (e.g., [www.smokefree.gov](http://www.smokefree.gov), 1-800-QUIT-NOW) will assist your patients in their cessation efforts.

The types of smoking cessation programs detailed in this section are:

- One-on-one counseling
- Group counseling
- Telephone counseling

Before initiating a program, please refer to the following checklist:

- ☐ Identify existing smoking cessation programs
- ☐ Identify the smoking cessation lead clinician (Please email [publichealth@va.gov](mailto:publichealth@va.gov) to obtain the name of this clinician at your VA facility) and/or the Health Behavior Coordinator at your facility
- ☐ Identify the process at your facility to initiate a new program (this could include adding privileges to existing scopes of practice)

- ☐ Determine time allocated for program and level of intervention that will work best:
  - Brief
    - Less than three minutes
    - 3-10 minutes
  - Intensive
    - 10-30 minutes
    - More than 30 minutes
  
- ☐ Determine type of program (e.g., telephone, group format, one-on-one counseling) to offer taking into account what is the best fit for your facility, the duration of follow-up allowed (should be at least six months), and who can provide medications (physicians, pharmacists, nurse practitioners)
  
- ☐ Setting up the clinic (after facility approval process)
  - Meet with coding and billing to establish clinic
  - Ensure that the clinic is set up with a stop code “707” so patients will not be billed for smoking cessation counseling as ***federal policy prohibits charging co-payment to Veterans for outpatient smoking cessation counseling***
  - Use appropriate diagnostic and clinic codes for smoking cessation counseling
    - Diagnostic Code: Tobacco Use Disorder (305.1)
    - Procedure Code (CPT): Will depend on the length of appointment
      - Use 99406 for an intermediate visit between 3-10 minutes
      - Use 99407 for an intensive visit lasting longer than 10 minutes
  - Although specific clinic names and note titles will vary by individual clinics, appointments for this intervention should be entered in the standard clinic used for patients receiving their HIV care. Similarly, note titles should reflect services provided in HIV clinic rather than specialty tobacco cessation programs.
  
- ☐ Develop clinic note templates specifically to address smoking cessation so that the patient's progress and response to interventions is easily documented and tracked in the patient's medical chart

Regardless of which type intervention you choose for your clinic, smoking cessation programs for HIV-infected individuals should have the following goals in common:

- Educate providers about the risks of cigarette smoking for HIV-infected individuals
- Adopt a standard-of-care that includes identifying and tracking patients who smoke, and encouraging smoking cessation among them
- Identify and denote all current cigarette smokers in Vista/CPRS
- Offer every patient who is a current smoker:
  - Motivational interviewing (conducted by their primary care provider)
  - Information about the clinic's smoking cessation program and program manager contact information
  - One-on-one counseling with the clinic's smoking cessation counselor or a referral to a smoking cessation intervention program available in your clinic
- Establish a bimonthly open house where patients who smoke can learn more about evidence-based cessation techniques and opportunities for cessation support through the clinic

## EXAMPLES OF INTENSIVE SMOKING CESSATION COUSELING

### ONE-ON-ONE COUNSELING

One-on-one counseling, or individual counseling, whether conducted in a 4-session or 8-session program, will require these common elements:

- Designate time in your schedule each week for a certain number of appointment slots
- Create a referral process to counseling that is known to all providers
  - Create a flier
  - Remind providers
  - Be proactive

- Schedule 15-30 minute sessions with patients
  - Combine counseling appointment times with ID appointments, when convenient for patients
  - Discuss number of sessions available (4-6 sessions versus as many as needed)
  - Discuss session spacing (e.g., biweekly, based on quit date)
- Outreach and follow up is important
  - Make sure patients know individual counseling is available
  - If a patient is interested, make sure to follow up (e.g., offer to remind them with calls/letters about appointments)
  - Long-term follow up can increase success
- Structure of sessions
  - Choose a protocol that you like that uses behavioral interventions (see below for some examples)

### ***Example of a 4-session Intervention***

Ideally, meet with patient for 15-30 minutes at least four times in person or by telephone.

**Appointment 1:** Prepare for the quit attempt

**Appointment 2:** (should be on or before the quit date)

- Review benefits of quitting
- Review quit plan
- Discuss concerns/fears (confidence and motivation, develop plan to address concern)
- Discuss plan for handling urges
- Introduce relaxation strategies such as diaphragmatic breathing

**Appointment 3:** Maintenance (approximately one week after quit date)

- Assess current cigarette use
- Discuss maintenance strategies
- Address stress management

#### **Appointment 4: Relapse prevention (approximately one month after quit date)**

- Assess current cigarette use
- Discuss positive experiences associated with quitting smoking and successful methods used to quit
- Assess and resolve problems encountered in quitting smoking and/or anticipated threats to abstinence
- Discuss the difference between a slip and a relapse
- Discuss strategies for managing and preventing relapse

Note, this program is flexible and can be condensed or expanded depending on the patient's needs. Sessions are best conducted in person, but telephone sessions can also be effective for Veterans who are not able to come in weekly.

#### ***Example of an 8-session Intervention***

This intervention uses a patient workbook based on McFall's model,<sup>2</sup> which is a one-on-one integrated smoking cessation program for patients with PTSD. The intervention as it appears here has been modified for the HIV-infected population. The patient workbook, *My Smoking Cessation Workbook*, consists of the following worksheets and sections:

- HIV and Smoking
- *My Smoking Triggers Worksheet*
- *Breaking the Link Between Smoking and Other Habits Worksheet*
- *Reasons to Quit Worksheet*
- *My Allies in Quitting* table
- *Getting Ready to Quit Worksheet* (strategies to reduce nicotine dependence)
- *Strategies and Skills for Quitting Worksheet* (coping with triggers and cravings)
- *My Action Plan for Coping with Smoking Triggers Worksheet*
- My Strategies to Use Immediately After Quitting
- Identifying and Coping with Nicotine Withdrawal
- Preventing a Smoking Relapse

- Preventing Weight Gain After Quitting
- Developing an Exercise Program
- Next Steps
- Patient Resources

**TABLE 8. EIGHT-SESSION SMOKING CESSATION INTERVENTION SCHEDULE**

Timeframe		Activities
MONTH 1	Week 1	<b>Baseline assessment of level of tobacco use:</b> Review workbook, check on other substance use and/or cravings and psychosocial stressors or issues that might interfere with quit program. Schedule quit date, assign homework to identify smoking triggers and reasons for quitting, review smoking cessation medications available, and establish next session.
	Week 2	<b>Preparing to quit:</b> Review workbook and discuss triggers and ways to mediate, check on other substance use/cravings/stressors, assign homework on getting support and completing <i>Getting Ready to Quit Worksheet</i> and <i>My Action Plan for Coping with Smoking Triggers Worksheet</i> . Confirm quit date, order bupropion/varenicline if going to be used, and schedule next session.
	Week 3	<b>Strategies and skills for quitting:</b> Review homework assignment, check on other substance use or cravings, assign homework on planning strategies to use after quitting and coping with nicotine withdrawal, confirm quit date, encourage abstinence, order NRT medications and provide instructions for use, and schedule next session.
	Week 4	<b>Planning ahead:</b> This session should be conducted shortly after quit date and should focus on preventing smoking relapse, support for continued abstinence, and correct use of medications. Encourage continued abstinence and schedule next session.
	Week 5	<b>Preventing smoking relapse:</b> Discuss cessation program and check for cravings and/or relapse and discuss interventions if present. Support continued abstinence and assign homework on weight control following smoking cessation. Schedule next session.

Timeframe	Activities
MONTH 2	<b>Weight control after smoking cessation:</b> Review homework assignment and encourage Veteran to adopt healthier eating habits that will assist in smoking cessation and weight control. Assign homework on benefits of physical exercise in a cessation program. Support continued abstinence and schedule next session.
MONTH 3	<b>Physical exercise:</b> Review homework and discuss how exercise can help the Veteran remain smoke free. Encourage establishment of an exercise regimen. Check on cravings/relapse and support continued abstinence. Schedule final visit.
MONTH 4	<b>Feedback and graduation:</b> Review homework and encourage Veteran to continue making healthier lifestyle choices to support their new smoke-free status. Support continued abstinence and provide graduation certificate.

*Note. Adapted with permission from Tobacco use cessation: A brief primary care intervention (A training manual for integrated primary care behavioral health providers and other tobacco cessation providers), 2010, VA Center for Integrated Healthcare. Retrieved from [https://www.mentalhealth.va.gov/coel/cih-visn2/documents/provider\\_education\\_handouts/tobacco\\_use\\_cessation\\_brief\\_intervention\\_manual\\_version\\_3.pdf](https://www.mentalhealth.va.gov/coel/cih-visn2/documents/provider_education_handouts/tobacco_use_cessation_brief_intervention_manual_version_3.pdf)*

This program is flexible and can be condensed or expanded depending on an individual Veteran's needs. These sessions are best conducted in person, but telephone sessions can also be effective for Veterans who are not able to come in weekly. Topics for each session are general guidelines and follow the patient workbook, but can be condensed into fewer sessions.

## GROUP COUNSELING

Smoking cessation quit groups are generally one hour and can be conducted by pharmacists, social workers, psychologists, psychology interns, or clinic nurses. It is important that the groups be advertised and held in or near the clinic where HIV-infected Veterans receive their primary care.

### Drop-in Support Groups

- Schedule a weekly, 1-hour block of time
  - Just before an HIV clinic time is often most convenient for patients



## ■ Recruit

- Post fliers in clinic and have providers distribute to patients
- Make sure your patients are aware that there is a drop-in group and provide reminder calls/letters if the patient requests

## ■ Open structure

- Patients do not need to make an appointment to attend a drop-in group
- Patients attending the group can be in any stage of quitting, including preparing to quit
- At the group, check in with each participant about their smoking, barriers to cessation, challenges, and lessons learned
- Prepare a group topic that can be tied into what patients are interested in discussing that day
- Maintain an open stance by letting participants' stated needs and discussion topics drive the focus of each group session

## *On-going Structured Group Therapy*

### ■ Schedule a weekly, 1-hour block of time

### ■ Recruit

- Post fliers in clinic and have providers distribute to patients
- Make sure your patients are aware that there is an on-going group and provide reminder calls/letters if the patient requests

### ■ Choose a program that will fit your schedule (weekly sessions, biweekly, etc.)

### ■ Cycle through crucial group topics every 6-8 weeks (other topics can be added):

- Psycho education about nicotine dependence
- Health consequences of smoking in the context of HIV and benefits of quitting
- Motivation to quit/setting a quit date
- Managing withdrawal symptoms and concerns about weight gain
- Mood and stress management
- Coping with urges to smoke

- Social support
- Relapse prevention

## TELEPHONE COUNSELING

Personalized telephone counseling initiated by your clinic or facility can be conducted by pharmacists, social workers, psychologists, psychology interns, or clinic nurses. The following telephone script is based on a pharmacist provider; however, it can be modified as needed for other providers. State quitlines may offer additional counseling resources during evening and weekend hours when clinic staff are unavailable.

All telephone counseling programs should include the following components:

- Schedule your telephone clinic for a block of time each week
- Create a referral process to telephone counseling that is known to all providers
  - Create a program flier
  - Remind providers the program is available
  - Encourage active and ongoing recruitment
- Describe to patients the purpose, nature, and structure of telephone counseling
  - Include specific smoking cessation strategies from the clinical practice guidelines and this provider handbook
- Conduct a program assessment, outreach, and follow up

### *Elements of an Example Pharmacy Managed Telephone Tobacco Cessation Clinic (PMTTCC)*

**Assessment:** Assessments are made by pharmacists at initial call. Initial and follow-up templates are used by all providers to ensure continuity of assessment.

**Program Clinicians:** Pharmacists trained under the *Rx for Change* program are the providers for this clinic. Pharmacy technician can conduct routine follow-up calls but cannot make any clinical assessments.

**Program Intensity:** Proactive telephone clinic (at least 10 sessions)

- Initial call (20-30 minutes)

- Follow-up calls (5-15 minutes depending on complexity)
  - 1-2 weeks after target quit date
  - Every month for six months, at nine months and 12 months

**Program Format:** Proactive telephone counseling with sample telephone smoking cessation script. Clinic templates are used in CPRS and complement the script.

**Type of Counseling & Behavioral Therapies:** Problem solving/skills training and intra-treatment social support are included.

**Medication:** All pharmacist providers have prescribing privileges and all patients are offered medications.

**Population:** Used for all populations.

For more information on setting up a PMTTCC, please contact Dr. Timothy Chen at VA San Diego Tobacco Cessation Clinical Resource Center at [SDCVAMCTCCRC@va.gov](mailto:SDCVAMCTCCRC@va.gov).

## TABLE 9: PMTTCC SCRIPT FOR INITIAL CALL (20-30 MINUTES)

### *Determine Patient Background and Smoking History*



#### Do you plan to quit within the next 30 days?

- If patient is not ready to quit within the next 30 days, consider providing counseling closer to the projected quit date

#### If so, have you set a Target Quit Date (TQD)?

- I would recommend establishing a quit date (holiday, birthday, weekend, day you finish last pack of cigarettes)

#### How long have you been smoking? (total packs smoked in a year or years of cigarette use)

#### To start, could you tell me how many cigarettes per day you are currently smoking?

- Occasionally patients will say they cut down to 5-10 cigarettes, ask how long ago this was. For example, if they were smoking up to one ppd as of last week, then base dosing and counseling on the one ppd (use clinical judgment)
- 1 pack per day (ppd) = 20 cigarettes

#### What is the most you've ever smoked? And how long ago?

- Main reason for this is to see patient trend for better assessment

**Have you ever tried to quit smoking in the past? If yes, how many times and for how long?**

- If patient has quit for more than three months or six months, it is important to reemphasize that it can be easily repeated and the likelihood of long-term abstinence can be sustained especially with their previous successes
- Also, ask what was the reason for relapse

**How did you try to quit? (cold turkey, medication, nicotine replacement products, or combination therapy)**

**Do you recall what happened with each medication? Which worked the best for you and how long have you used each one?**

- It is important to identify what medications patients have tried to see if they used the medications correctly and also to see if they gave the product a legitimate try (i.e., using nicotine gum as needed or stop using after two weeks or only used three pieces per day are not legitimate quit attempts with the medication, thus should not rule out retrieval of medication)

**What is your reason or reasons for wanting to quit smoking?**

- To provide more patient-specific counseling, reaffirm their reasoning for quitting while identifying other reasons specific to that patient (i.e., pulmonary disorders, heart disease, cancer, family, cost)

**What are some barriers or concerns that you have when you consider quitting?**

- Identify certain barriers that can include but are not limited to weight gain, irritability, inability to fight off cravings, lack of support from family/friends, triggers (while driving, after meals, alcohol, coffee in the morning), stress
- Once these barriers are identified, tailor your counseling to the patient

**On a scale of 1-10 with 10 being the most, how confident are you in quitting? (10 being most confident)**

**On the same scale of 1-10, how important is it for you to quit? (10 being most important)**

## Administer Fagerström Test for Nicotine Dependence



### Fagerström Test for Nicotine Dependence

**1. How soon after you wake up do you smoke your first cigarette?**

Within 5 minutes (3 pts.); 6-30 minutes (2 pts.); 31-60 minutes (1 pt.);  
After 60 minutes (0 pts.)

**2. Do you find it difficult to refrain from smoking in the places where it is forbidden (e.g., church, library, cinema)?**

Yes (1 pt.); No (0 pts.)

**3. Which cigarette would you hate most to give up?**

The first one in the morning (1 pt.); Any other (0 pts.)

**4. How many cigarettes a day do you smoke?**

10 or less (0 pts.); 11-20 (1 pt.); 21-30 (2 pts.); 31 or more (3 pts.)

**5. Do you smoke more frequently during the first hours after waking than during the rest of the day?**

Yes (1 pt.); No (0 pts.)

**6. Do you smoke if you are so ill that you are in bed most of the day?**

Yes (1 pt.); No (0 pts.)

### NICOTINE DEPENDENCE SCORE (Points):

(0-2 pts.) Very low dependence

(3-4 pts.) Low dependence

(5 pts.) Medium dependence

(6-7 pts.) High dependence

(8-10 pts.) Very high dependence

## Counseling and Preparation for the Quit Attempt



### After setting a quit date, start preparing for your quit attempt.

1. If you are using NRTs, the purpose is to get your body less addicted to nicotine, slowly get you more used to having less nicotine in your body and minimizing withdrawal symptoms.
2. The other part that is important is the behavioral part. You have been used to smoking \_\_\_ cigarettes for years and this has become a routine. The more you put into the preparation, the higher the chance you will be able to stop smoking. You want to create new habits.
3. Before you quit, as you are going through your day smoking, think about when you usually smoke and identify your routine. Think about what you can do instead of smoking. Which of your activities do not trigger smoking? What activities trigger smoking and if possible, can you avoid these activities?

#### For example:

- If you wake up in the morning and drink coffee while smoking, change your routine (e.g., replace coffee with tea or a small glass of orange juice, go for a walk)
- Think about different ways to avoid triggers (e.g., not drinking coffee, not drinking alcohol, avoid people who smoke or places that allow smoking)
- Distract yourself by doing an activity not associated with smoking (e.g., exercise, video games)
- Substitute tobacco (e.g., sugar-free candy, sugar-free gum, straws, sunflower seeds, carrot/celery sticks)

### Here are some withdrawal symptoms you might expect

#### Withdrawal Symptoms

#### Recommendation

- |   |                                  |
|---|----------------------------------|
| ■ Chest tightness (tension created by body's need for nicotine) | ■ Practice relaxation techniques |
|   | ■ NRTs                           |

Withdrawal Symptoms	Recommendation
<ul style="list-style-type: none"> <li>■ Stomach pain</li> <li>■ Constipation</li> <li>■ Gas (decrease of intestinal movement)</li> </ul>	<ul style="list-style-type: none"> <li>■ Drink fluids</li> <li>■ Eat fruits and vegetables</li> </ul>
<ul style="list-style-type: none"> <li>■ Cough</li> <li>■ Dry throat</li> <li>■ Nasal drip (body getting rid of mucus)</li> </ul>	<ul style="list-style-type: none"> <li>■ Drink fluids</li> <li>■ Avoid stress</li> </ul>
<ul style="list-style-type: none"> <li>■ Cravings (nicotine withdrawal/habit)</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>DEADS Strategy</b> (See p. 80-81) (Delay, Escape, Avoid, Distract, Substitute)</li> </ul>
<ul style="list-style-type: none"> <li>■ Depressed mood (normal process for a short period)</li> </ul>	<ul style="list-style-type: none"> <li>■ Increase pleasurable activities</li> <li>■ Get support from family/friends</li> <li>■ Discuss with provider</li> </ul>
<ul style="list-style-type: none"> <li>■ Difficulty concentrating (body needs time to adjust to not having constant nicotine stimulation)</li> </ul>	<ul style="list-style-type: none"> <li>■ Avoid stress</li> <li>■ Plan workload accordingly</li> </ul>
<ul style="list-style-type: none"> <li>■ Dizziness (body is getting extra oxygen)</li> </ul>	<ul style="list-style-type: none"> <li>■ Be cautious the first few days</li> </ul>
<ul style="list-style-type: none"> <li>■ Fatigue (lack of stimulation of nicotine)</li> </ul>	<ul style="list-style-type: none"> <li>■ Take naps</li> <li>■ Do not push yourself</li> <li>■ NRTs may help</li> </ul>

Withdrawal Symptoms	Recommendation
<ul style="list-style-type: none"> <li>Hunger (cravings for cigarette can be mistaken for hunger)</li> </ul>	<ul style="list-style-type: none"> <li>Drink lots of water</li> <li>Eat low-calorie snacks</li> </ul>
<ul style="list-style-type: none"> <li>Insomnia (nicotine affects brain wave function and sleep patterns)</li> </ul>	<ul style="list-style-type: none"> <li>Limit caffeine (reduce by 50%)</li> <li>Practice relaxation techniques</li> </ul>
<ul style="list-style-type: none"> <li>Irritability (body's craving for nicotine)</li> </ul>	<ul style="list-style-type: none"> <li>Exercise</li> <li>Practice relaxation techniques</li> <li>Take a hot bath</li> </ul>
<ul style="list-style-type: none"> <li>Stress</li> </ul>	<ul style="list-style-type: none"> <li>Exercise</li> <li>Practice relaxation techniques</li> <li>Avoid known stressful situations</li> <li>Plan workload accordingly</li> </ul>

*\*Most withdrawal symptoms go away after a few days to 1-2 months at the most. Cravings/urges are the only symptoms that can return even after one year of smoking cessation.*

### Here are some techniques to cope with the cravings (DEADS Strategy)

**Delay:** The most important thing to remember is that an urge will go away if you just give it time. Waiting out an urge, especially if you begin to do something else, is easier than you may expect. Believe it or not, the urge will fade after 5 to 10 minutes, even if you do not smoke. It also helps if you have a positive attitude about the urge disappearing. Think "this won't last, the urge will go away," or "I would like a cigarette, but I'm not going to have one, because I don't need one."

**Escape:** Another technique for dealing with an urge is to remove yourself from the situation or event, which led to the urge. If you're in a room where others are smoking, and an urge hits, get up and take a short walk. You can walk around the building, or outside, until you feel ready to re-enter the situation, without smoking.



**Avoid:** Avoiding situations where you'll be tempted to smoke will be particularly important in the first days and weeks after you quit. For example, if you regularly go to places where there's a lot of smoking, like coffee shops or clubs, it's best to avoid them for a little while to allow you to get used to not smoking.

**Distract:** Another way to control urges is to get busy, get back to what you were doing before the urge hit. Also, there may be other things that you enjoy doing which are incompatible with smoking. Some suggestions we have are working in the yard, reading a magazine, walking, taking a shower or working a crossword puzzle.

**Substitute:** When you feel that you want a cigarette, substitute something else for a cigarette. We suggest sugarless candy or sugarless gum, especially if you are watching your weight. Also, you could eat a piece of fruit or drink a soft drink. You can also use something to chew on like a straw or a toothpick. The trick is to come up with something you like that can be easily substituted for a cigarette.

*\*Go over individual triggers and discuss appropriate DEADS strategies (see Chapter V)*

### Differentiate to patient between "relapse" and "slips."

- If you try to use the DEADS strategy and you have a slip, don't go back into smoking. It is ok. Instead, think about what you techniques you tried and try a different technique the next time you experience an urge/craving.
- Relapse is when you return to how much you were smoking before quitting.

**There are many health risks associated with smoking. You are making a great choice to quit smoking as I see that you already have health problems that can be worsened if you continue to smoke (*be patient specific and focus the counseling to that patient, if they absolutely don't have any health problems, discuss possible health problems by race/sex/family history*). It is never too late to quit smoking and you will be able to see numerous health benefits once you do.**

### *Risks for individuals who are HIV infected and smoke:*

- Decreased response to HIV therapy and a more rapid progression to AIDS
- Can make it harder to fight off HIV-related infections
- Overall mortality (death rate) increases

- Women with HIV who smoke have a greater risk of getting human papillomavirus (HPV), which can cause cancer of the cervix
- For individuals with HIV and hepatitis C, smoking can be very harmful to the liver
- Smoking is a common cause of sexual dysfunction

***Benefits of smoking cessation for individuals who are HIV infected:***

- Better chance of avoiding HIV-related infections
- Better chance of response to HIV therapy
- Food will taste better
- Better performance of physical activities
- Improved appearance (e.g., reduces wrinkling, whiter teeth)
- In two weeks to three months, lung function can increase by 30%, circulation improves
- In 1-9 months, better ability to clear mucus and coughing decreases
- In one year, risk of CHD decreases by 50%
- In five years: risk of stroke is similar to someone that has never smoked
- In 10 years, risk of lung cancer reduced by 50% and risk of other cancers decreases
- In 15 years, risk of CHD is similar to someone that has never smoked

**By quitting smoking, you can save a lot of money (i.e., \$ 7.35 U.S. average per pack). For each day you quit smoking, you can save the money and after a few months, you can REWARD yourself by buying something nice or go on a nice vacation.**

***Administer Questions to Determine Best Smoking Cessation Therapy***



**I will ask you a couple of questions about your medical history so we can determine which therapy is safe for you (chart review can be done here as well to get this information).**

## Smoking Cessation Medications

## Medical History Questions and Smoking Cessation Medication Considerations

### Nicotine Replacement Therapies

Can you tell me if you've had any recent chest pain, heart attacks, or shortness of breath? Do you wear dentures or have any jaw problems? Do you have breathing problems such as asthma or COPD? Do you have any nasal conditions such as allergies? Are you pregnant or plan to be pregnant?

- NRTs should be avoided in recent MI (within 2 weeks)
- Nicotine gum should be avoided in patients with dentures and TMJ
- Nicotine nasal spray and oral inhaler should be used with caution in patients with uncontrolled airway disease
- Nicotine nasal spray should be avoided in patients with allergic rhinitis
- NRTs are pregnancy category D (assess risk v. benefit)

### Bupropion (Zyban®)

Do you have a history of seizures, anorexia, or bulimia? Do you drink alcohol, if so, how much? Have you ever had problems with alcohol in the past, if so, how long ago? Do you have any liver problems that you're aware of? Are you on any medications for mood? Are you pregnant or plan to be pregnant?

- Avoid in patients with history of seizures, anorexia, or bulimia

## Bupropion (Zyban®) (cont.)

- Avoid in patients at risk for alcohol withdrawal
- Avoid in patients with severe liver disease, check liver function tests
- If patient is on mood medications, make sure patient's provider is aware of the addition of bupropion
- Bupropion is pregnancy category C (assess risk v. benefit)

## Varenicline (CHANTIX®)

Are you on any medications for mood? Do you have any suicidal ideations? Do you have any renal disease? Are you pregnant or plan to be pregnant?

- Avoid in patients with severe psychiatric illness
- Need renal adjustment
- Requires follow up every 28 days to assess suicidal/aggressive behavior
- Varenicline is pregnancy category C (assess risk v. benefit)
- Assess cardiac risk (avoid in high risk patients if possible)

## Counsel Patient on Therapy Use and Follow Up



### Assessment/Plan

- Determine the best medication for the patient and counsel the patient on appropriate use
- Arrange for follow-up

## PMTTCC INITIAL CALL TEMPLATE (see script on previous pages)

### Pt Smoking Hx

Are you ready to quit within the next 30 days? *(if no, advise pt to quit and call us back when ready)*

Target quit date:

Years of tobacco use:

Current status/highest daily use in the past:

Number of quit attempts:

Medications used and what happened *(duration of use, proper technique)*:

Reason for quitting *(reaffirm patient's reason for quitting and discuss risks to smoking specific to that patient)*:

Barriers to smoking cessation *(e.g., first cigarette in the morning, stress, etc.)*:

On a scale from 1-10, confidence in quitting *(10 most confident)*:

On a scale from 1-10, importance of quitting *(10 most important)*:

### Pt Medical Hx

If using NRTs:

- Recent MI/Chest Pain/SOB/Pregnancy:
- Other (Dentures, Bronchospastic Disease):

If using Bupropion:

- Hx of Seizures, Anorexia, Bulimia/Alcohol Use/Liver Dysfunction/Pregnancy/HIV:
- Psych History:

If using Varenicline:

- Psych History:
- Kidney Function:
- Pregnancy:
- Cardiovascular:

### Plan for Quit Attempt

Medications ordered:

Contact number for any questions/concerns or ready for next refill:

Next follow-up date:

Preferred time of contact:

Notes *(example)*: This patient was counseled on the use of his smoking cessation medication. The patient showed a satisfactory understanding of his medication regimen *(risks and benefits)*, including knowing the drug name, dose, frequency, indication, and

*proper storage and disposal of the medication. Educated pt on risks associated with smoking while using nicotine replacement products or risks associated with bupropion/ varenicline; pt understands.*

## PMTTCC FOLLOW-UP CALL TEMPLATE

Actual quit date:

Experiencing any withdrawal symptoms: *(yes or no? - most disappear from 2-4 weeks)*

### Withdrawal Symptoms

### Recommendation

- Chest tightness (tension created by body's need for nicotine)

- Practice relaxation techniques
- NRTs

- Stomach pain
- Constipation
- Gas (decrease of intestinal movement)

- Drink fluids
- Eat fruits and vegetables

- Cough
- Dry throat
- Nasal drip (body getting rid of mucus)

- Drink fluids
- Avoid stress

- Cravings (nicotine withdrawal/habit)

- **DEADS Strategy** (See p. 80-81)  
(Delay, Escape, Avoid, Distract, Substitute)

- Depressed mood (normal process for a short period)

- Increase pleasurable activities
- Get support from family/friends
- Discuss with provider

- Difficulty concentrating (body needs time to adjust to not having constant nicotine stimulation)

- Avoid stress
- Plan workload accordingly

- Dizziness (body is getting extra oxygen)

- Be cautious the first few days

Withdrawal Symptoms	Recommendation
<ul style="list-style-type: none"> <li>■ Fatigue (lack of stimulation of nicotine)</li> </ul>	<ul style="list-style-type: none"> <li>■ Take naps</li> <li>■ Do not push yourself</li> <li>■ NRTs may help</li> </ul>
<ul style="list-style-type: none"> <li>■ Hunger (cravings for cigarette can be mistaken for hunger)</li> </ul>	<ul style="list-style-type: none"> <li>■ Drink lots of water</li> <li>■ Eat low-calorie snacks</li> </ul>
<ul style="list-style-type: none"> <li>■ Insomnia (nicotine affects brain wave function and sleep patterns)</li> </ul>	<ul style="list-style-type: none"> <li>■ Limit caffeine (reduce by 50%)</li> <li>■ Practice relaxation techniques</li> </ul>
<ul style="list-style-type: none"> <li>■ Irritability (body's craving for nicotine)</li> </ul>	<ul style="list-style-type: none"> <li>■ Exercise</li> <li>■ Practice relaxation techniques</li> <li>■ Take a hot bath</li> </ul>
<ul style="list-style-type: none"> <li>■ Stress</li> </ul>	<ul style="list-style-type: none"> <li>■ Exercise</li> <li>■ Practice relaxation techniques</li> <li>■ Avoid known stressful situations</li> <li>■ Plan workload accordingly</li> </ul>
<p><b>Slips/Relapse: yes or no?</b> <i>(If yes, what happened, what techniques did you try, and what else you can try when the same situation occurs again)</i></p> <p><b>On a scale of 1-10, how confident are you in staying smoke free (10 most confident):</b></p> <p><b>On a scale of 1-10, how important is it for you to stay smoke free (10 most important):</b></p> <p><b>NRT (or other medication) current usage:</b></p> <p><b>Any adverse drug reactions with prescribed medications? (yes or no)</b></p> <p><b>Reiterate behavioral counseling with patient:</b> <i>(provide encouragement to patient, re-emphasize patient's reason for quitting, and the rewards of smoking cessation)</i></p> <p><b>Assessment/Plan:</b></p> <ol style="list-style-type: none"> <li>1. <i>Pt is doing well (or minimal slips) so will continue current therapy.</i></li> <li>2. <i>Pt needs change in therapy (relapsed or adverse drug reaction), refer to pharmacist.</i></li> </ol> <p><b>Medication(s):</b></p> <p><b>Will contact pt for next f/u on:</b></p> <p><b>Preferred contact time:</b></p> <p><b>Notes (example):</b> <i>Patient to contact PMTCC line for questions/concerns.</i></p>	

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## Appendix B. Evaluating Smoking Cessation Programs

To assess the effectiveness of your program, track the outcome measures related to its objectives. The use of these outcome measures as performance measures will elicit more participation support among your fellow clinicians. Below is a list of smoking cessation program performance measures you may want to track yearly, quarterly, monthly, weekly, and/or daily.

- Number of patients seen in your clinic
- Number of patients identified as a smoker in CPRS (Tobacco Use Disorder ICD-9 Code 305.1)
- Number of patients identified as smoker when prompted by a provider
- Number of patients in each dependence level, as defined by Fagerström Test for Nicotine Dependence
  - (0-2 pts.) Very low dependence
  - (3-4 pts.) Low dependence
  - (5 pts.) Medium dependence
  - (6-7 pts.) High dependence
  - (8-10 pts.) Very high dependence
- Number of patients reporting abstinence (supported by cotinine level, CO<sub>2</sub> – optional)
  - Continuous abstinence (1, 3, 6, and 12 months)
  - 7 day point prevalence (not smoking during the last 7 days)
- Number of patients referred to the smoking cessation program
- Number of encounters/visits completed
- Number of patients enrolled in the clinic
- Number of quit attempts
- Number of patients prescribed the different types of medication regimens and their outcomes (abstinence)
  - Combination NRTs such as the patch + lozenges
  - Combination bupropion + NRT (e.g., nicotine patch)

- NRT monotherapy
  - Varenicline
- 
- Number and details of counseling sessions
    - Face-to-face
    - Telephone
    - Duration and frequency
    - Provider who delivered the intervention

To track the effectiveness of your facility in providing smoking cessation assistance, below is a checklist of performance measures you may want to track yearly, quarterly, monthly, weekly, and/or daily.

- Number of smokers whose HIV-care providers encouraged patients to quit/used motivational interviewing during a visit
- Number of smokers screened for their interest in a smoking cessation program
- Number of smokers ready for a screening visit with a smoking cessation counselor following this visit
- Number of smoking cessation medication prescriptions ordered by providers
- Number of patients prescribed specific medication regimens and their outcomes (i.e., abstinent at 1 month, 3 months, 6 months, 12 months)
- Number of counseling sessions, frequency, duration, provider who delivered interventions

## Appendix C. Educational Materials and Additional Resources for Patients

Please provide patients who are considering or actively pursuing smoking cessation with the following fact sheet and websites.

### SMOKING AND HIV FACT SHEET

If you have HIV or AIDS and you smoke cigarettes, you put a lot of extra stress on your body. Smoking weakens your immune system making it harder for your body to fight off infection. Smoking is responsible for more deaths each year than from HIV, alcohol and drug use, car accidents, murders, and suicides combined. (Note. Adapted from Tobacco Smoking and HIV, California Smokers' Helpline, [www.californiasmokershelpline.org](http://www.californiasmokershelpline.org) and It's Time to Live! HIV and Smoking, New York State Department of Health, [www.nyhealth.gov/diseases/aids/publications](http://www.nyhealth.gov/diseases/aids/publications))

#### *What is Tobacco?*

Tobacco is a green, leafy plant that is grown in warm climates. After it is picked, it is dried, ground up, and used in different ways. Nicotine is a chemical substance found in tobacco leaves. Addiction to nicotine is what keeps people smoking.

#### *What is in a Cigarette?*

Every single cigarette contains an estimated 4,800 harmful chemicals including 11 proven to cause cancer in humans. Some of the chemicals found in cigarettes are:

- **Acetone** – found in nail polish remover
- **Ammonia** – household cleaner
- **Formaldehyde** – used to embalm dead bodies
- **Arsenic** – used in rat poison
- **Nicotine** – found in bug sprays
- **Tar** – used in paving roads
- **Carbon monoxide** – poisonous gas released in car exhaust fumes
- **Cadmium** – main ingredient in battery acid

## Smoking and HIV

Smoking can make it harder to fight off deadly infections and smoking cigarettes can make it harder to fight off HIV-related infections like fungal thrush, oral hairy leukoplakia caused by the Epstein-Barr virus, and types of pneumonia.

### Health Effects of Smoking

#### ■ Heart Disease

Some HIV medications can raise the amount of fats and cholesterol in your blood. Fats and cholesterol clog the blood flow to your heart, raise your blood pressure and put more stress on your heart. These factors can raise your chances of heart disease, a heart attack, or a stroke. Smoking can make all of these problems worse.

#### ■ Oral Problems, Mouth Sores, and Mouth Cancer

People with HIV may get sores and infections (like thrush) inside the mouth and on the tongue and lips. Smoking can make these worse and can cause dental problems, gum disease, and mouth cancer.

#### ■ Immune System

HIV medications can help make your immune system stronger, however, smoking weakens your immune system, which makes it harder to fight off infections.

#### ■ Lung Diseases

People with HIV who smoke get lung cancer, bronchitis, chronic obstructive pulmonary disease (COPD), and other lung infections more than smokers who do not have HIV. Smokers with HIV are also at a greater risk for pneumonia (new-mone-ya) and Pneumocystis (new-mo-sist-iss) jiroveci pneumonia (PCP).

People with HIV who smoke are more likely to get emphysema. This disease hurts the walls of the lungs and makes it hard to breathe. It may lead to other lung infections that can cause death.

#### ■ Problems for Women

Women with HIV who smoke have a greater risk of getting human papillomavirus (HPV), which can cause cancer of the cervix. Smoking during pregnancy increases the risk of your baby dying or having serious health problems.

#### ■ Other Illnesses and Cancers

Smoking damages the stomach, kidneys, liver, pancreas, and bladder. If you have HIV and hepatitis C, smoking can be very harmful to your liver.

## Smoking and Stress

**“This is how I deal with my HIV.”**

Being HIV infected can cause stress, anxiety, and depression. You may feel that smoking helps you relax, takes your mind off these things, and helps you cope with the stress of being HIV infected. But smoking affects the “big picture” of your health. If you can quit smoking, you can take a big step toward staying healthier.

### The Rewards

From 20 minutes to 20 years, the benefits of quitting smoking last a lifetime.

#### 20 minutes after quitting

Your blood pressure drops and the circulation in your hands and feet improves.

#### 12 hours after quitting

The carbon monoxide level in your blood returns to normal.

#### 2 days after quitting

Your taste and smell senses improve.

#### 2 weeks to 3 months after quitting

Your heart attack risk drops and your lung function improves.

#### 1 to 9 Months after quitting

Your coughing and shortness of breath decrease.

#### 1 year after quitting

Your added risk of heart disease is half that of a smoker's.

#### 5 to 15 years after quitting

Your risk of stroke is now equal to a non-smoker's.

#### 10 years after quitting

If you are an average smoker (one pack a day) your lung cancer death rate drops by almost half. Risk of cancers of the mouth, throat, esophagus, bladder, kidney, and pancreas decreases.

#### 15 years after quitting

Your added risk of heart disease is the same as a non-smoker's.

## WEB AND TELEPHONE RESOURCES

- Quit Tobacco. Make Everyone Proud  
[www.ucanquit2.org](http://www.ucanquit2.org)
- Smokefree.gov  
[www.smokefree.gov](http://www.smokefree.gov)
- National Quit Line  
1-800-QUIT-NOW (1-800-784-8669)  
24 hours a day, 7 days a week
- Women.smokefree.gov  
[www.women.smokefree.gov](http://www.women.smokefree.gov)
- Womenshealth.gov  
[www.womenshealth.gov/smoking-how-to-quit](http://www.womenshealth.gov/smoking-how-to-quit)
- VHA Smoking and Tobacco Use Cessation  
[www.publichealth.va.gov/smoking](http://www.publichealth.va.gov/smoking)
- My HealtheVet  
[www.myhealth.va.gov](http://www.myhealth.va.gov)
- Centers for Disease Control and Prevention  
[www.cdc.gov/tobacco](http://www.cdc.gov/tobacco) and  
[www.cdc.gov/tobacco/data\\_statistics/sgr/2010/consumer\\_booklet](http://www.cdc.gov/tobacco/data_statistics/sgr/2010/consumer_booklet)
- U.S. Department of Health and Human Services  
[www.ahrq.gov/consumer/tobacco/helpsmokers.htm](http://www.ahrq.gov/consumer/tobacco/helpsmokers.htm)
- Office of the Surgeon General  
[www.surgeongeneral.gov/tobacco](http://www.surgeongeneral.gov/tobacco)
- Healthfinder Tobacco Resources Page  
[www.healthfinder.gov/scripts/SearchContext.asp?topic=860](http://www.healthfinder.gov/scripts/SearchContext.asp?topic=860)
- National Cancer Institute  
[www.cancer.gov](http://www.cancer.gov)  
1-877-44U-QUIT (1-877-448-7878)  
8am-8pm, Monday-Friday (ET)
  - LiveHelp chat: <https://cissecure.nci.nih.gov/livehelp/welcome.asp>  
8am-11pm, Monday-Friday (ET)

### ***Spit Tobacco Resources***

- Spit Tobacco: A Guide to Quitting  
[www.nidcr.nih.gov/OralHealth/Topics/SmokelessTobacco/SmokelessTobaccoAGuideforQuitting.htm](http://www.nidcr.nih.gov/OralHealth/Topics/SmokelessTobacco/SmokelessTobaccoAGuideforQuitting.htm)
- U.S. Food and Drug Administration  
[www.fda.gov/TobaccoProducts/ucm173429.htm](http://www.fda.gov/TobaccoProducts/ucm173429.htm)
- Center for Disease Control and Prevention  
[www.cdc.gov/tobacco/basic\\_information/smokeless](http://www.cdc.gov/tobacco/basic_information/smokeless)

## Appendix D. Educational Materials and Additional Resources for Providers

The resources below provide you with additional information when helping your patients quit smoking.

### THE 5 A'S OF SMOKING CESSATION INTERVENTIONS

#### ASK — 1 minute

Ask patients to describe their smoking status.

- A. I NEVER smoked or smoked LESS THAN 100 cigarettes.
- B. I stopped smoking more than 2 weeks ago but less than 1 year ago.
- C. I stopped smoking more than 1 year ago.
- D. I smoke regularly/not thinking of quitting in the next 30 days.

If B or C, reinforce their decision to quit, congratulate and encourage. If D, document smoking status on their chart. Begin steps below.

#### ADVISE — 1 minute

Provide clear, strong advice to quit with personalized messages about the impact of smoking on health; urge every tobacco user to quit.

#### ASSESS — 1 minute

Assess the willingness to make a quit attempt within 30 days.

- Patient is willing to make a quit attempt in the next 14-30 days.
- Patient is not willing to make a quit attempt (Review the 5 R's on p. 97).

#### ASSIST — 3 minutes

Recommend the use of approved pharmacotherapy, refer to community cessation services or Internet when appropriate, and/or:

- Help the patient develop a quit plan.
- Provide problem-solving methods and skills for cessation. Provide social support as a part of the treatment.
- Help patient obtain extra treatment/social support for quitting in the smoker's environment.



- Recommend the use of approved pharmacotherapy.
- Provide self-help smoking cessation materials.

**ARRANGE - 1 minute +**

Assess smoking status every visit, reinforce/encourage cessation.

## THE 5 R'S OF ENHANCING MOTIVATION TO QUIT TOBACCO

**RELEVANCE - 1 minute**

Ask patient about how quitting may be personally relevant.

- Longer and better quality of life
- Extra money
- People you live with will be healthier
- Decrease chance of heart attack, stroke or cancer
- If pregnant, improves chance of healthy baby

**RISKS - 1 minute**

Ask the patient about their perception of short-term, long-term and environmental risks of continued use.

- Acute (breathing, asthma, pregnancy)
- Long-term (heart, lungs, health)

**REWARDS - 1 minute**

Ask the patient about perceived benefits/rewards for quitting tobacco use.

- Health (self & others)
- Food tastes better
- Better sense of smell
- Feel better
- Example to others
- Additional years of life

**ROADBLOCKS - 3 minutes +**

Ask patient about perceived roadblocks to quitting.

- Withdrawal symptoms

- Fear of failure
- Weight gain
- Lack of support
- Depression
- Enjoyment of tobacco

**REPETITION - 1 minute +**

Respectfully repeat the 5 R's each visit, providing motivation and information.

## SAMPLE: SMOKING CESSATION PROGRAM SCREENING FORM

NAME: \_\_\_\_\_

SSN (last 4): \_\_\_\_\_

PHONE #: \_\_\_\_\_

DATE: \_\_\_\_\_

1. Do you smoke cigarettes every day?

☐ YES

☐ NO

2. Are you interested in receiving help to quit smoking?

☐ YES

☐ NO

3. How soon after waking do you smoke your first cigarette?

\_\_\_ Less than 5 minutes

\_\_\_ 5 to 30 minutes

\_\_\_ 31 to 60 minutes

4. How many cigarettes do you smoke each day?

\_\_\_ More than 30 cigarettes

\_\_\_ 21 to 30 cigarettes

\_\_\_ 11 to 20 cigarettes

\_\_\_ 1 to 10 cigarettes

**IT IS IMPORTANT FOR YOUR HEALTH THAT YOU QUIT SMOKING.**

*If you are not ready to quit now, we can still tell you more about our program. Please hand this form to the Medical Clerk and someone will contact you soon. Thank you.*

# SAMPLE: HIV CLINIC FORM

## HIV CLINIC

SMOKER: ☐ Yes ☐ No

MD Counsel: ☐ Yes ☐ No

### 1. CHECK IN

PATIENT NAME: \_\_\_\_\_ LAST 4 SSN: \_\_\_\_\_

PROVIDER: \_\_\_\_\_ APPT TIME: \_\_\_\_\_ ARRIVAL TIME: \_\_\_\_\_

### 2. TRIAGE / SEE PROVIDER

#### PROCEDURES TODAY

☐ PNEUMOVAC ☐ PPD ☐ HEPATITIS B ☐ HEPATITIS A ☐ HEP A / B  
☐ TETANUS/DIP ☐ INFLUENZA ☐ PENTAMIDINE ☐ OTHER \_\_\_\_\_

☐ LABS TODAY ( ) already ordered ( ) please order

\_\_\_\_ CD4 \_\_\_\_ CBC \_\_\_\_ Minerals \_\_\_\_ PSA \_\_\_\_ HGBA1C  
 \_\_\_\_ VL \_\_\_\_ CHEM 7 \_\_\_\_ LPA (non-fasting) \_\_\_\_ TSH \_\_\_\_ OCCULT BLOOD  
 \_\_\_\_ U/A \_\_\_\_ LFT's \_\_\_\_ LPA (fasting) \_\_\_\_ RPR \_\_\_\_ OTHER \_\_\_\_\_

☐ FUTURE LABS DATE \_\_\_\_\_ ( ) already ordered ( ) please order

\_\_\_\_ CD4 \_\_\_\_ CBC \_\_\_\_ Minerals \_\_\_\_ PSA \_\_\_\_ HGBA1C  
 \_\_\_\_ VL \_\_\_\_ CHEM 7 \_\_\_\_ LPA (non-fasting) \_\_\_\_ TSH \_\_\_\_ OCCULT BLOOD  
 \_\_\_\_ U/A \_\_\_\_ LFT's \_\_\_\_ LPA (fasting) \_\_\_\_ RPR \_\_\_\_ OTHER \_\_\_\_\_

☐ RADIOLOGY \_\_\_\_\_ Reason for Study \_\_\_\_\_

EDUCATION - Medication Review: \_\_\_\_\_

Provide Literature on: \_\_\_\_ HTN \_\_\_\_ DM \_\_\_\_ Hyperlipidemia \_\_\_\_ Smoking Cessation \_\_\_\_ Other \_\_\_\_\_

### 3. ENCOUNTER

DIAGNOSIS ☐ HIV ☐ Other Diagnosis #1 \_\_\_\_\_ ☐ Other Diagnosis #2 \_\_\_\_\_

☐ Established ☐ New ☐ Consult

### 4. PATIENT TO SEE PRIOR TO DISCHARGE FROM CLINIC TODAY

☐ Social Worker ☐ Research Nurse: \_\_\_\_\_

## WEB RESOURCES AND ONLINE TRAININGS

- VHA Smoking and Tobacco Use Cessation intranet  
<http://vaww.publichealth.va.gov/smoking>
- National Institutes of Health – National Institute of Drug Abuse – Smoking Cessation  
<http://health.nih.gov/topic/SmokingCessation>
- Health Resources and Services Administration  
[www.hrsa.gov/stopsmoking](http://www.hrsa.gov/stopsmoking)
- Centers for Disease Control and Prevention – Smoking and Tobacco Use  
[www.cdc.gov/tobacco](http://www.cdc.gov/tobacco)
- American Lung Association  
[www.lung.org](http://www.lung.org)
- American Cancer Society  
[www.cancer.org](http://www.cancer.org)
- American Heart Association  
[www.heart.org](http://www.heart.org)
- Spit Tobacco: A Guide to Quitting  
[www.nidcr.nih.gov/OralHealth/Topics/SmokelessTobacco/SmokelessTobaccoAGuideforQuitting.htm](http://www.nidcr.nih.gov/OralHealth/Topics/SmokelessTobacco/SmokelessTobaccoAGuideforQuitting.htm)
- Smoking Cessation & HIV  
[www.mpaetc.org/scripts/prodView.asp?idproduct=142](http://www.mpaetc.org/scripts/prodView.asp?idproduct=142)
- National Cancer Institute  
[www.cancer.gov](http://www.cancer.gov)  
1-877-44U-QUIT (1-877-448-7848)  
8am-8pm, Monday-Friday (ET)
  - LiveHelp chat: <https://cissecure.nci.nih.gov/livehelp/welcome.asp>  
8am-11pm, Monday-Friday (ET)
- Surgeon General's Report  
How Tobacco Causes Disease: The Biological and Behavioral Basis for Smoking-Attributable Disease (2010)  
[http://www.surgeongeneral.gov/library/reports/tobaccosmoke/full\\_report.pdf](http://www.surgeongeneral.gov/library/reports/tobaccosmoke/full_report.pdf)

- U.S. Department of Health and Human Services, Public Health Service  
Treating Tobacco Use and Dependence: 2008 Update (Clinical Practice Guideline)  
[http://www.ahrq.gov/clinic/tobacco/treating\\_tobacco\\_use08.pdf](http://www.ahrq.gov/clinic/tobacco/treating_tobacco_use08.pdf)
- VA Center for Integrated Healthcare  
Tobacco Use Cessation: A Brief Primary Care Intervention (A Training Manual for Integrated Primary Care Behavioral Health Providers and other Tobacco Cessation Providers)  
[https://www.mentalhealth.va.gov/coe/cih-visn2/documents/provider\\_education\\_handouts/tobacco\\_use\\_cessation\\_brief\\_intervention\\_manual\\_version\\_3.pdf](https://www.mentalhealth.va.gov/coe/cih-visn2/documents/provider_education_handouts/tobacco_use_cessation_brief_intervention_manual_version_3.pdf)
- U.S. Department of Veterans Affairs  
Integrated care for smoking cessation: Treatment for Veterans with PTSD (For a copy of this manual, contact VA's Clinical Public Health at [publichealth@va.gov](mailto:publichealth@va.gov))
- Online Trainings  
The University of Wisconsin School of Medicine and Public Health offers a free online, 1-hour CME program on treating tobacco use and dependence. Participants will learn best evidence-based practices as culled from the DHHS Public Health Service (2008) Treating Tobacco Use and Dependence (Clinical Practice Guideline). Visit <http://cme.uwisc.org/index.pl> for further information.

## Appendix E. FAQs

### ***Does nicotine cause cancer?***

Nicotine does not cause cancer but is the addictive chemical in tobacco that makes it so hard to stop smoking. Tobacco smoke has over 4,000 chemicals and more than 50 of these chemicals are cancer causing. Nicotine in the form of a patch, gum, or lozenge doesn't contain any of the cancer-causing agents that are found in cigarettes. These products give you a reduced amount of nicotine to help calm your cravings and irritability so you can focus on the emotional and behavioral aspects of your habit.

### ***Can I stay on nicotine gum indefinitely? What are the risks if I can't kick the gum habit?***

Typically, people use nicotine replacement therapy for about four to six months. The recommended course of therapy for nicotine gum is 12 weeks and you should use it for the full 12 weeks to improve your chances of success. In one clinical trial, gum was used for as long as one year without any negative effects. Beyond one year, the long-term effects of nicotine exposure aren't clear. If you are having difficulty giving up the gum try to gradually reduce your dependence by substituting regular or sugar-free gum. If that doesn't work, you may want to seek assistance from a smoking-cessation expert who can help guide you through a behavioral program to change the habit part of your nicotine gum use. Work out a plan to wean yourself off of nicotine gum, and be willing to do the work it takes to achieve your goal.

### ***What is the best way to quit smoking?***

There is no one way to quit smoking, but we do know that a combination of behavioral counseling and the use of FDA-approved smoking cessation medications are the most effective elements of any treatment plan. Behavioral counseling may include a brief session on how to quit from your primary care providers or a number of sessions through a smoking cessation clinic or telephone counseling. But the combination of both counseling and medication appears to be the key. We also know that the greater the number of behavioral counseling sessions, the more likely you will be successful in quitting.

### ***I have tried quitting before and I failed. How do I know if I will be more successful this time?***

It's important to keep in mind that it takes even the most motivated smoker several quit attempts before he or she is able to quit for good. To increase your chances of being successful this time, have a plan. Talk with your health care provider about quitting and ask about getting a prescription for smoking cessation medications such as nicotine replacement therapy or bupropion or

a combination of medications. Set a quit date and plan to throw away all cigarettes in your home, workplace, and car. Tell your friends and family about your plan and let them know that you will need their help and support. Think about the ways your health will improve and think about all the money you will save by quitting smoking. Try to think about what worked or helped you the last time you tried to quit and think about the challenges that you faced as well.

***Are “light” or “low tar” or “natural” cigarettes less harmful than regular cigarettes?***

No and in fact, there are new regulations that will prevent cigarette manufacturers from making these claims. They are all still harmful and carry the same health risks as “regular cigarettes.” Quitting is the only way to reduce your risk of smoking-related illnesses and premature death.

***I only smoke occasionally, like when I am at parties or at a bar. What are the health risks of occasional smoking?***

Even occasional smoking carries health risks and there really is no safe amount to smoke. Anytime you inhale cigarette smoke (even that from someone else smoking), the smoke enters the lungs and damages tissue in the lungs. Cigarette smoke can also restrict blood flow to the heart and increase your risk for heart attack. Many people who are casual or occasional smokers also convince themselves that they can quit whenever they want, but many of them find themselves becoming regular smokers. Again, there is no safe amount to smoke.

***Can hypnosis help me to quit?***

There have been a lot of studies looking at just this question and the majority have found that hypnosis alone isn’t effective in helping smokers quit. It is still important to make sure you receive behavioral counseling and use FDA-approved smoking cessation medications as part of your quit attempt. Hypnosis or meditation or other therapies may help you with reducing or managing the stress of quitting smoking, but they often aren’t enough by themselves.

***What about e-cigarettes or electronic cigarettes? Can they help me quit?***

There has been a lot in the news about e-cigarettes or electronic cigarettes and you may have seen them on the internet. However, there are no studies to show that these are effective in helping smokers quit. In addition, there are international concerns about the safety of these products as they are currently not regulated. In fact, their sale is banned in a number of countries and the FDA has published updates to consumers about potential safety concerns. They are not the same as FDA-approved smoking cessation medications, which are known to be safe and effective in helping smokers quit.









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Washington, DC 20420

HIV Provider Smoking Cessation Handbook:  
A Resource for Providers

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