A PATIENT-CENTERED APPROACH TO APPLYING GUIDELINES FOR TREATING TOBACCO DEPENDENCE

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Clinical practice guidelines have the potential to improve health care quality by decreasing inappropriate variations in practice and by accelerating the incorporation of scientific evidence into clinical practice [1,2]. A common goal of guidelines is to recommend empirically supported strategies for managing chronic conditions that affect a large proportion of the population, such as asthma, diabetes, and tobacco dependence. Such guidelines often stress the need for patients to adopt specific treatment regimens.

An important trend in medical practice is to emphasize patient-centered care and patient empowerment, where the needs, desires, and preferences of the patient are taken into account [3–5]. This approach has been shown to be particularly effective in the care of patients with chronic conditions when treatment involves the need for a behavioral change (eg, smoking cessation) [6]. However, the reality of time constraints leaves little room during the typical office visit for researching and applying the latest guideline recommendations to an individual patient, or for discussing the patient's personal desires and preferences in detail.

Tobacco dependence is a chronic condition for which effective treatment exists [7]. Despite the widely publicized negative health consequences of cigarette smoking, a quarter of the U.S. adult population continues to smoke. For the patient, quitting smoking may represent an intimidating challenge and a significant lifestyle change. A patient-centered smoking cessation intervention offered in the primary care setting may be the ideal approach for physicians to attempt to reduce the incidence of tobacco dependence, yet studies suggest that smokers are not consistently identified or treated in clinic settings [8]. Although research indicates that approximately 60% of current smokers wish to quit smoking [9] and that effective interventions exist for tobacco users [7], very few smokers request or receive formal smoking cessation intervention.

This article provides an overview of empirically supported assessment and intervention strategies for tobacco users who present in a primary care setting. Drawing from the recently updated Department of Health and Human Services clinical practice guideline for treating tobacco dependence [7], the authors use a series of physician-patient encounters to illustrate how specific recommendations (**Table 1**) might be applied to an actual patient. Also provided are tips for how to maximize use of time during a typical primary care office visit to intervene on behalf of the tobacco-dependent patient (*see box on page 12*).

Initial Intervention Attempt

Ms. DeVita presents to Dr. Bronstein for a periodic health examination. She normally sees Dr. Chen, but because Dr. Chen recently left the group practice, she agrees to see Dr. Bronstein.

The examination is unremarkable. Ms. DeVita reports no symptoms except for a lingering cough that began 4 weeks ago following an episode of the flu. Her past medical history is positive for a miscarriage at age 32 years. During that time, the patient suffered a major depressive episode and responded positively to treatment with antidepressants. A second depressive episode occurred following her divorce. The patient works full-time as a paralegal and currently lives with her 2 children, aged 10 and 13 years. Because Ms. DeVita's father has recently died, Dr. Bronstein opts to look for clues that she may be at risk for another depressive episode.

"My record states that you suffered from depression after your divorce. Your father's death must have been very traumatic for you. Are you experiencing any depressive symptoms now? Have you had any trouble sleeping, or do you feel fatigued?"

"Yes, I do sometimes have trouble sleeping and I've also been a bit irritable. I've been smoking more to help deal with the stress of my father's death and caring for my children alone."

Noticing that Ms. DeVita's smoking is not recorded on her chart, Dr. Bronstein takes a history of her

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Table 1. Major Recommendations for Treating Tobacco Use and Dependence

Tobacco dependence is a chronic condition that may require repeated interventions, but effective treatments exist.
Patients who are willing to quit should be provided recommended tobacco-dependence treatments. Patients who are unwilling to quit should be provided with a brief intervention to help motivate them to quit.
Tobacco dependence should be identified, documented, and treated in every user seen in a health care setting.
Brief tobacco dependence treatment is effective and should be offered to every user.
Tobacco-dependence counseling is effective and its effectiveness increases with counseling intensity (ie, minutes of person to person contact).
Counseling and behavioral therapies that are particularly effective and should be used with all patients attempting tobacco cessation include practical counseling, social support within treatment, and social support outside of treatment.
Effective pharmacotherapies for smoking cessation should be used in all patients attempting to quit, except when contraindicated. First-line therapies include bupropion SR, nicotine gum, nicotine inhaler, nicotine nasal spray, and the nicotine patch.
Tobacco-dependence treatments are both clinically effective and cost-effective relative to other medical and disease prevention interventions.

Data from Fiore MC, Bailey WC, Cohen SJ, et al. Treating tobacco use and dependence. Clinical Practice Guideline. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service; 2000.

tobacco use. She has smoked between 1 and 2 packs of cigarettes per day for most of the past 20 years. She has no history of smoking-related illness.

"Ms. DeVita, have you ever attempted to quit smoking?"

"Yes. I quit for about a year before my divorce and I didn't smoke while I was pregnant. But I'm not ready to try again right now. It's just too much, dealing with my father's death and everything. Besides, I'd rather not gain 15 pounds again. When I'm a little less stressed, do you think cutting back rather than quitting cold turkey could be an option?"

"I know that quitting smoking is a big step, but most people find it easier to quit altogether rather than to cut back gradually. Fortunately, we now have medications that make quitting less stressful than it used to be. I'm not going to badger you, but as your physician I have a responsibility to strongly advise you to quit smoking, and to help you any way I can. The sooner you quit, the better your chance of getting rid of that cough and preventing any more serious illnesses from occurring. I'm also concerned about your children's exposure to second-hand smoke."

"I understand, doctor, but this just isn't a good time for me to quit right now. After I get my dad's estate settled, I'll be less stressed and better able to tackle smoking."

"Okay. We can talk about it again next time I see you. If you change your mind before then, give me a call, so we can discuss medications and I can give you a few tips. All right?"

Dr. Bronstein conducts a thorough assessment of Ms. DeVita's depressive symptoms. Because the symptoms are mild and the onset followed the death of her father 2 weeks earlier, he concludes that they represent bereavement rather than a major depressive episode. Nevertheless, he makes a chart note to assess for depression at the next visit, and he invites Ms. DeVita to call him if her symptoms worsen or persist beyond 2 months.

Table 2. The "5 As" for Brief Intervention

Ask about tobacco use	Identify and document tobacco use status for every patient at every visit
Advise tobacco users to quit	In a clear, strong, and personalized manner, urge every tobacco user to quit
Assess willingness to make a quit attempt	Ask if the patient is willing to make a quit attempt at this time
Assist the patient in quitting	Provide counseling and pharmacotherapy for patients willing to make a quit attempt
Arrange for follow-up	Schedule follow-up contact, preferably within the first week after the quit date

The "5 As" for Brief Intervention

Based on a review of empiric literature and standards developed by the National Cancer Institute and others, the recently updated guideline for treating tobacco use and dependence recommends that physicians follow the "5 As" (**Table 2**) in initiating assessment and intervention with tobacco users. The strategies are designed to be brief, requiring 3 minutes or less of the physician's time [7]. Step 1 is *asking* about the patient's smoking status. In this case, asking the patient about her smoking status revealed that she is a daily, heavy smoker.

Step 2 is *advising* tobacco users to quit smoking in a manner that is clear and strong. In the case scenario,

Table 3. The "5 Rs" for Enhancing Motivation to Quit Tobacco Use

Relevance	Encourage the patient to indicate as specifically as possible why quitting is personally relevant. Motivational information has the greatest impact if it is relevant to a patient's disease status or risk, family or social situation (eg, having children in the home), health concerns, age, gender, and other important patient characteristics (eg, prior quitting experience, personal barriers to cessation).
Risks	Ask the patient to identify potential negative consequences of tobacco use, and highlight those that seem most relevant to the patient. Emphasize that smoking low-tar/low-nicotine cigarettes or use of other forms of tobacco (eg, smokeless tobacco, cigars, pipes) will not eliminate these risks. Examples of risks are: *Acute risks*: shortness of breath, asthma exacerbation, harm to pregnancy, impotence, infertility, increased serum carbon monoxide *Long-term risks*: heart attack and stroke, lung and other cancers, chronic obstructive pulmonary disease, long-term disability and need for extended care *Environmental risks*: increased risk for lung cancer and heart disease in spouses; higher rates of smoking by children of tobacco users; increased risk for low birth weight, SIDS, asthma, middle-ear disease, and respiratory infections in children of smokers
Rewards	Ask the patient to identify potential benefits of stopping tobacco use. Examples of rewards are: improved health; better-tasting food; saved money; improved self-esteem; better-smelling home, car, clothing, and breath; an end to stress about quitting; a good example for children.
Roadblocks	Ask the patient to identify barriers or impediments to quitting and note treatment elements (eg, problem solving, pharmacotherapy) that could address barriers. Typical barriers include withdrawal symptoms, fear of failure, weight gain, lack of support, depression, enjoyment of tobacco.
Repetition	Repeat motivational intervention each time an unmotivated patient visits the clinic setting. Tobacco users who have failed in previous attempts should be told that most people make repeated attempts to quit before they are successful.

SIDS = sudden infant death syndrome.

Dr. Bronstein makes a strong appeal to quit smoking in the context of Ms. DeVita's health and the impact her smoking has on her children.

Step 3 is *assessing* a patient's willingness to quit. Intervention efforts will not be successful without sufficient motivation to quit smoking on the part of the tobacco user. Recommending that the patient enter a smoking cessation program may be premature and ineffective if the smoker considers her behavior to be unproblematic. For the patient who is presently unwilling to quit smoking, the physician should promote motivation to quit. The steps involved in a motivational intervention (the "5 Rs") are shown in **Table 3**. Because Ms. DeVita is unwilling to quit at this time, Dr. Bronstein has appropriately stated that he will approach the subject again when he next sees her.

Documenting Tobacco Use

This patient has smoked for 20 years, but her smoking status was not immediately apparent in her chart. The clinical practice guideline recommends documentation of tobacco use status (ie, current, former, or never) along with documentation of vital signs. Studies have demonstrated that such documentation increases the frequency with which physicians inquire about tobacco use and advise patients to quit [10,11].

Extent of Tobacco Use that Warrants Intervention

Most clinicians are aware that any regular tobacco use is unhealthy; however, many are uncertain as to how much use warrants formal assessment and intervention. Given the health risk associated with smoking, it is a physician's responsibility to provide every patient who is a tobacco user with intervention. Even brief advice on smoking cessation offered by a physician or other care provider produces abstinence rates of up to 5% to 10%; offered routinely, this could have a significant public health impact [12]. Unfortunately, surveys indicate that smokers receive recommendations from their physicians less than 50% of the time [12]. One likely reason for this is that physicians become discouraged and hesitant to advise smoking cessation because they see that few of their patients follow their advice. Although this reaction is understandable, physicians should realize that even when their advice does not initiate an immediate quit attempt, it may move the patient closer to making the decision to quit.

Reducing Tobacco Use versus Complete Abstinence
Patients should be encouraged to completely abstain from cigarette smoking and should be warned that other tobacco products (eg, smokeless tobacco) are associated with significant health risks. It is unlikely that a heavy smoker would be able to maintain light or infrequent smoking without resorting to old smoking patterns. Furthermore, even lighter smoking (less than 5 cigarettes per day) has been associated with elevated health risks [13]. Strategies aimed at gradual reduction of smoking versus quitting "cold turkey" may lead to continued craving and prolonged withdrawal symptoms in tobacco users. Moreover, evidence suggests that smokers attempting to reduce their tobacco use compensate by taking more or deeper puffs per cigarette [14]. The guideline developers concluded that there is insufficient evidence to support counseling patients to cut back on smoking (rather than to quit) as a way to reduce or avoid the harmful consequences of smoking [7].

Second Intervention Attempt

Three months later, Ms. DeVita sees Dr. Bronstein for evaluation of a minor shoulder strain. When asked about her tobacco use, she reports that she unsuccessfully tried to limit her smoking to 10 cigarettes per day. This time when he assesses her willingness to make a quit attempt, Dr. Bronstein learns that she would like to try. He congratulates her for attempting to reduce her smoking and for deciding to try to quit. He tells her that completely stopping smoking is often easier than gradual reduction.

Dr. Bronstein asks Ms. DeVita to describe what enjoyment she gets from smoking and what reasons she now has for wanting to quit. They spend the next few minutes discussing a quit plan that is tailored to her needs. Dr. Bronstein says that he would like to prescribe a medication that will make it easier to quit by reducing urges to smoke and nicotine withdrawal symptoms. To help with her quit plan, he instructs Ms. DeVita to follow the STAR mnemonic [7]:

- **S**et a quit date for as soon as possible
- **T**ell family, friends, and coworkers about quitting and request understanding and support
- **A**nticipate challenges to the planned quit attempt (including nicotine withdrawal symptoms), particularly during the critical first few weeks
- **R**emove tobacco products from her environment and, prior to quitting, avoid smoking in frequently visited places (eg, work, home, car)

After discussing the advantages and disadvantages of the various pharmacotherapies that are available (**Table 4**), Dr. Bronstein and Ms. DeVita decide to try bupropion SR. Dr. Bronstein also provides some literature from the American Lung Association. He schedules a follow-up visit for 8 weeks later and says that he or his nurse will call in a few weeks to check on Ms. DeVita's progress.

Three weeks later, Dr. Bronstein telephones Ms. DeVita to ask about her cessation attempt. She reports that she has not been able to go more than 1 day without smoking and is becoming discouraged. Dr. Bronstein congratulates her for trying, offers advice about specific situations that she finds challenging (eg, driving to work without smoking), and suggests that she investigate an intensive smoking-cessation program offered by a local hospital.

The Role of the Primary Care Physician
Education and counseling. Physicians should provide patients with some basic didactic information about quitting smoking. For example, smoking represents an addiction to nicotine; therefore, smoking cessation must be undertaken as seriously as one would approach any other drug addiction. Willpower alone is insufficient. Patients should also be advised that they can expect to experience unpleasant nicotine withdrawal symptoms, which include mood disturbance, insomnia, irritability, difficulty concentrating, increased appetite, and weight gain. For most individuals, these symptoms peak within 1 or 2 days of quitting and dissipate within 1 or 2 weeks. However, recent evidence suggests that some individuals experience withdrawal syndromes of atypical severity and extended time-course [15].

Physicians can also suggest ways to avoid smoking after initiating the quit attempt. The physician can help the patient identify high-risk situations—events or activities that because of past associations increase the risk of smoking or relapse (eg, being around smokers, drinking alcohol) and suggest that they be avoided. The physician can help the patient select coping skills to use when she experiences a craving for cigarettes. Cognitive coping skills include reminding herself of her reasons for quitting, telling herself that the urge will pass, and repeating the statement, "Smoking is not an option." Behavioral coping skills include leaving a situation, engaging in some distracting activity, taking deep breaths, and seeking social support. Patients should be assisted in obtaining social support outside the clinic environment, such as from family, friends, and coworkers. The physician can train the patient in support solicitation skills (eg, show videotapes that model asking for help) and prompt support seeking in the patient, including informing her of community resources such as hotlines.

Table 4. Approved Pharmacotherapies for Smoking Cessation

Agent	Advantages	Disadvantages	Approximate Cost/Day*	Comments
Bupropion SR	Atypical antidepressant with both dopaminergic and adrenergic actions. Shown to be effective in smoking patients both with and without depression histories. Non-nicotine base, ease of usage, and perception as "real" medicine appeal to some patients.	Contraindicated in patients with a seizure disorder, with a current or past diagnosis of bulimia or anorexia nervosa, who have used a monoamine oxidase inhibitor within the previous 14 days, or who are taking another medication that contains bupropion. Side effects include insomnia (35%–40%) and dry mouth (10%).	$3.50–$4.00	Available exclusively by prescription (Zyban). Can be used in combination with NRTs. Dosing begins 1–2 weeks prior to target quit date. Patients should begin with a dose of 150 mg every morning for 3 days, then increase to 150 mg twice daily for 7–12 weeks following the quit date.
Nicotine gum	Provides patient with control over dosage, which can be administered in response to cigarette cravings.	Side effects include mouth soreness, hiccups, dyspepsia, nausea, and jaw ache. These are generally mild and can often be alleviated by correcting the patient's chewing technique. Approximately 2% develop dependence to the gum.	$4–$7 for 10 pieces	Available exclusively as an over-the-counter medication and is packaged with instructions on usage (Nicorette, Nicorette Mint, Nicorette Orange). The 2-mg gum is recommended for patients smoking less than 25 cigarettes per day, whereas the 4-mg gum is recommended for patients smoking 25 or more cigarettes per day. The gum should be used for up to 12 weeks with no more than 24 pieces per day.
Nicotine inhaler	Provides patient with control similar to nicotine gum. Administration behavior mimics cigarette smoking, which may provide some nonpharmacologic reinforcement.	Side effects include local irritation in the mouth and throat observed in 40% of patients. Coughing (32%) and rhinitis (23%) were also common. Severity of the symptoms was generally rated as mild, and the frequency of symptoms decreased with continued use. Bioavailability decreases at temperatures below 50°F.	$11–$12 for 10 cartridges	Available exclusively as a prescription medication (Nicotrol Inhaler). Name is misnomer, since dose is absorbed bucally, similar to nicotine gum. Each cartridge delivers 4 mg of nicotine over approximately 80 inhalations. Multiple inhalations are needed to obtain sufficient nicotine. Recommended dosage is 6–16 cartridges per day. Recommended duration of therapy is up to 6 months. Patients should be instructed to taper dosage during the final 3 months of treatment.
Nicotine nasal spray	Designed to deliver nicotine more rapidly than other NRT products, but less rapidly than cigarettes. Therefore, may be better substitute for smoking than gum, patch, or inhaler.	Side effects reported include moderate to severe nasal irritation in the first 2 days of use (94%); 81% still reported nasal irritation after 3 weeks, although rated severity was mild to moderate. Nasal congestion and transient changes in sense of smell and taste were also reported. Should not be used in persons with severe reactive airway disease.	$6–$7 for 12 doses	Available exclusively as a prescription medication (Nicotrol NS). A dose consists of one 0.5-mg delivery to each nostril (1 mg total). Initial dosing should be 1–2 doses per hour, increasing as needed for symptom relief. Minimum recommended treatment is 8 doses per day, with a maximum limit of 40 doses per day (5 doses per hour). Each bottle contains approximately 100 doses. Recommended duration of therapy is 3–6 months.
Nicotine patch	Does not provide the dosage control of other NRTs. This may be seen as an advantage (ie, disassociates nicotine delivery from contextual factors) or a disadvantage (ie, nonresponsive to phasic cravings).	Approximately 35% of patients will have a local skin reaction that is typically mild but may worsen over the course of therapy. Other side effects are insomnia and vivid dreams. Patch can be removed at night to mitigate these effects.	$4.50–$5.50 for brand names; generic may be less	Available both as an over-the-counter and prescription medication (Nicoderm CQ, Nicotrol, generic). Treatment for 8 weeks or less has been shown to be as efficacious as longer treatment periods; 16- and 24-hour patches are of comparable efficacy. Clinicians should consider starting treatment on a lower patch dose in patients smoking 10 or fewer cigarettes per day.

NRT = nicotine replacement therapy.

*Based on retail prices in Tampa, FL, in May 2001.

Social support. In addition to counseling, the physician should provide support by offering encouragement (eg, communicating belief in the patient's ability to quit). The physician can note that effective tobacco dependence treatments are now available and that half of all people who have ever smoked have now quit. The physician can also provide support by encouraging the patient to talk about the quitting process (eg, reasons the patient wants to quit, concerns or worries about quitting, difficulties encountered) and by communicating caring and concern.

Supplemental information. The clinical guideline recommends that supplementary materials be provided to patients [7]. Written materials on smoking cessation are available through federal agencies (eg, the National Cancer Institute), nonprofit agencies (eg, the American Lung Association), and local or state health departments. The materials should be culturally, racially, educationally, and age appropriate to individual patients and may be targeted to certain populations of smokers, such as pregnant women. A busy physician may be tempted to hand out one or more of the available self-help booklets in lieu of providing personal advice called for by the "5 As." However, there is insufficient evidence to support this practice [7].

Pharmacotherapy

Over the past decade, several effective pharmacotherapies for tobacco dependence have become available. Except in certain circumstances (eg, contraindications), all smokers making a quit attempt should receive pharmacotherapy [7]. Five first-line pharmacotherapies have been identified that reliably increase long-term smoking abstinence rates (Table 4). Four of the first-line agents are nicotine replacement therapies (NRTs). NRTs provide the user with a nicotine dose sufficient to reduce withdrawal symptoms without further reinforcing cigarette-smoking behavior. The primary alternative to NRTs (and the only agent with U.S. Food and Drug Administration [FDA] approval for smoking cessation) is bupropion SR (Zyban), an atypical antidepressant thought to work by blocking neural reuptake of dopamine, norepinephrine, or both. Use of this agent appears to reduce withdrawal symptoms and cravings [12]. Unlike with NRTs, bupropion SR administration begins 1 to 2 weeks prior to the targeted quit date. The agent is contraindicated in patients with a history of a seizure disorder or an eating disorder or in patients who have recently used a monoamine oxidase inhibitor or other medication containing bupropion (eg, Wellbutrin). Second-line pharmacotherapies are clonidine and nortriptyline; these should be considered in patients in whom first-line medications are contraindicated or not helpful.

The efficacy of all pharmacotherapies is comparable, roughly doubling cessation rates over control conditions [7]. Because of the lack of sufficient data to rank-order the 5 first-line agents, choice of a specific first-line pharmacotherapy must be guided by factors such as clinician familiarity with the medications, contraindications for selected patients, patient preference, previous patient experience with a specific pharmacotherapy (positive or negative), and patient characteristics (eg, history of depression, concerns about weight gain). Pharmacotherapies may be combined, and there is evidence that combining the nicotine patch with nicotine gum or nicotine nasal spray increases long-term abstinence rates over those produced by a single form of NRT. NRTs are safe in patients with a history of cardiovascular disease.

Long-term pharmacotherapy. This approach may be helpful with smokers who report persistent withdrawal symptoms during the course of pharmacotherapy or who desire long-term therapy. A minority of individuals who successfully quit smoking use ad libitum NRT medications (eg, gum, nasal spray, inhaler) long-term. The long-term use of these medications does not present a known health risk. Additionally, the FDA has approved the use of bupropion SR for long-term maintenance.

Pharmacotherapy for light smokers. If pharmacotherapy is used with light smokers, clinicians should consider reducing the dose of first-line NRT pharmacotherapy. No adjustments are necessary when using bupropion SR.

Intensive Clinical Interventions

Although few smokers are attracted to intensive clinical interventions, the best behavioral programs have efficacy rates comparable to pharmacotherapies and appear to improve outcomes when combined with pharmacotherapies [7,12]. Patients should be made aware of local smoking cessation programs and their potential usefulness; however, because few patients will seek such help, physicians should avoid suggesting that intensive interventions are necessary for successful cessation.

The clinical practice guideline identifies several characteristics associated with effective intensive interventions [7]. One such characteristic is treatment intensity, which can be a function of number of sessions, session length, or types of clinicians involved with the intervention. A dose-response relationship is generally seen between treatment intensity and outcome. The guideline recommends programs that consist of at least

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Time-Efficient Tips for Smoking Cessation Intervention

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1. Document tobacco use in the problem list. As seen in the case scenario involving Dr. Bronstein and Ms. DeVita, failure to document tobacco use can result in a delay in smoking cessation intervention. When a current or past history of tobacco use is revealed during a patient visit, this information should be documented in the medical record along with the number of pack-years and, if the patient is a previous smoker, the date that the patient quit. Such documentation serves as a critical reminder that tobacco use should be discussed with patients at every visit.

2. Set an explicit agenda at each patient visit. Setting an agenda at the start of a patient visit takes only 2 to 3 minutes and saves time overall by focusing the visit and allowing a planned approach to other issues at subsequent visits [1]. In setting a visit-specific agenda, the physician should actively solicit the patient's important issues for that visit first.

If the patient is a documented smoker and tobacco use is not included on her agenda, the physician should include smoking in his portion of the visit agenda. If the patient has complex or chronic problems, the physician might consider scheduling a later visit specifically to focus on smoking. This both helps "clear the decks" of other issues for that visit and signals to the patient the importance of smoking cessation as a health priority. If the patient is a previous smoker, the physician should periodically put smoking on the agenda and confirm that the patient has successfully maintained abstinence.

During the first encounter between Dr. Bronstein and Ms. DeVita, the visit-specific agenda was implicitly negotiated. When Ms. DeVita mentioned smoking in the context of her grief reaction, Dr. Bronstein adjusted his agenda to take a history and strongly recommend that she quit smoking. When she explained that she was not ready to try quitting, Dr. Bronstein appropriately agreed to discuss the issue during her next visit. A more explicit approach often elicits the most important concerns on a patient's mind and helps the physician and patient set appropriate priorities for their limited time together. Furthermore, during explicit agenda-setting, the physician often can assess where the patient is on the continuum of readiness to make a behavioral change (ie, not yet ready for a quit attempt, considering a quit attempt, attempting to quit, maintaining abstinence) [2].

3. Target the intervention strategy to the patient's readiness to quit. The physician should establish a smoking cessation plan tailored to each patient [3]. If the patient is not yet ready to quit, briefly bringing up smoking in a patient-centered, empathetic context is helpful. If the patient is considering quitting, discussing the pros and cons of quitting along with barriers and motivators helps move the patient along the continuum. The physical examination offers a time-saving opportunity to carry on a targeted conversation about smoking. When the patient is ready to establish a quit plan, the STAR mnemonic is helpful (ie, **S**et a quit date; **T**ell family, friends, and coworkers about quitting; **A**nticipate challenges; **R**emove tobacco products and avoid temptations). Tailoring the intervention to the patient's stage of readiness will maximize both its efficiency and effectiveness.

4. Use the range of available health resources in patient follow-up. It is critical to support a patient's quit effort with between-visit follow-up and reinforcement in making a difficult behavioral change. Having a well-organized office staff and a personal relationship with the patient are important. Although in the case scenario Dr. Bronstein made an interim telephone call to his patient, this between-visit follow-up could have been handled by a nurse or medical assistant, particularly if that person knew Ms. DeVita personally. If possible, personnel who conduct follow-up phone calls should have specific training in motivational counseling.

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4 sessions lasting at least 10 minutes each. Barring special circumstances, pharmacotherapy should be included. Both individual and group counseling were found to be effective, as was proactive telephone counseling. Two important general components of successful counseling are 1) providing practical information and training in problem solving and coping techniques and 2) providing intratreatment social support and helping the patient obtain extratreatment support.

Additionally, the specific behavioral approach of rapid smoking (and other aversive smoking procedures) was found to be effective. Performed in a controlled clinical setting, rapid smoking involves inhaling on a cigarette about every 6 seconds until nausea develops. Although this intervention is effective, its therapeutic use has dropped off since the late 1980s, when the efficacy of new pharmacotherapies was found to be equivalent [16]. Currently, aversive therapies are being reexamined and may be appropriate for smokers who have not responded to other treatments. Intensive clinical interventions tend to produce 1-year abstinence rates of 10% to 30%, depending on intensity level, specific behavioral components, inclusion of pharmacotherapy, and nature of the population served. Physicians should always inform their patients about local cessation programs.

Relapse

Even the most effective tobacco-use interventions are plagued by high relapse rates. Indeed, tobacco use has been defined as a "chronic condition that often requires repeated intervention" [7]. Patients should be advised to avoid any tobacco use after cessation and warned that as many as 90% of those who have a single postcessation cigarette eventually return to daily smoking [17].

Studies have demonstrated that continued contact with patients improves treatment outcomes for smoking cessation. Step 5 of the "5 As"—*arrange* follow-up—is particularly important for the typical patient who does not participate in an intensive clinical intervention. A follow-up contact (which may occur by telephone) should be arranged with the patient shortly after the target quit date. By scheduling such a contact, the physician emphasizes the importance of quitting and communicates personal support for the patient's effort. The contact itself provides an opportunity to offer additional encouragement and support, monitor progress, and provide further assistance (eg, adjustment of pharmacotherapy instructions, referral to an intensive program, advice about weight gain). Recent evidence indicates that patients also can derive benefit from a series of mailed relapse-prevention materials over an extended period of time [18].

If a patient relapses, which is statistically likely, steps should be taken to ensure that the experience does not discourage future quitting attempts. Patients should be made aware that the typical smoker requires several serious quit attempts before achieving long-term success. Although patients must enter each quit attempt motivated by an expectation of success, setbacks should be viewed as learning experiences. With each relapse, patients learn more about their personal strengths and vulnerabilities, the nature of nicotine addiction, and relapse risk factors they need to be better prepared for in the future.

Important Patient Characteristics to Consider

Gender

Studies examining gender differences in tobacco use and cessation have shown that although smoking prevalence rates are now comparable in men and women, gender-related differences exist in typical use patterns, quitting success, nicotine sensitivity, and motivation to smoke. For example, some studies have demonstrated that female tobacco users are lighter smokers than their male counterparts; however, female smokers are less likely to quit smoking and less successful in initial cessation attempts, and they experience higher relapse rates [19]. Women also appear to be less sensitive to nicotine and thus may benefit less from NRT [20]. Female smokers are more likely to report smoking cigarettes to manage negative mood (eg, stress) and to control weight. These factors have been identified as important influences on women's smoking habits and success in quitting [21]. Finally, some preliminary evidence suggests that women may have greater difficulty with quit attempts occurring in the late luteal phase of their menstrual cycle [22]. It may be helpful to advise women to choose a quit date during the follicular phase of their cycle.

Postcessation Weight Gain

Typical weight gain following smoking cessation is 6 to 9 lb [23]; those who smoke heavily are at highest risk for postcessation weight gain [7,23]. This issue is of greatest concern among female smokers, many of whom report that they begin and continue to smoke to control appetite and reduce body weight [24–27]. Women are also more likely than men to report using smoking as a weight-control strategy [28]. Fear of weight gain has increasingly become a primary deterrent to smoking cessation in many women and may be a major trigger for relapse [29]. Reportedly, women

get more weight-control benefits from smoking, suffer more postcessation weight gain, and are more concerned about this weight gain than men [30,31]. Moreover, increased appetite in women is one of the primary withdrawal symptoms that differ between women and men [24,32].

The current guideline suggests informing patients that modest postcessation weight gain (versus the often exaggerated gains patients anticipate) is likely but that continued smoking poses a far greater health risk. The patient should be warned that taking extreme measures, such as greatly restricting food intake while trying to quit smoking, may endanger the quit attempt. Instead, the clinician should offer assistance with weight-management strategies after the patient has successfully quit smoking (eg, "Tackle one problem at a time! After you have quit smoking successfully, we can talk about how to reduce your weight.") [7]. Meanwhile, physicians should encourage a healthy lifestyle that includes regular exercise, healthy eating habits, and limited alcohol consumption. If weight is a major concern, the patient may be directed toward 2 pharmacotherapies (bupropion SR and nicotine gum) that have been found to delay postcessation weight gain. However, both are associated with compensatory weight increases after termination of treatment [7].

Psychiatric History

The covariance of vulnerability to negative moods (eg, depression, anxiety) and smoking has been noted in many studies. Smokers appear to be twice as likely as nonsmokers to have a history of clinical depression [33], and tobacco users with such comorbidities are less able to quit smoking and are more likely to relapse [33,34]. Although some reports have suggested that intensive cessation programs tailored to address specific comorbid issues such as depression are more beneficial than standard interventions [16,35,36], the clinical practice guideline concludes that current evidence is insufficient to recommend matching smokers to such specialized programs. The guideline does note that bupropion SR and nortriptyline might be considered as cessation aids for smokers with current or past depression because these medications are beneficial for treating both conditions [7].

Alternative Treatments

Hypnosis is the most popular nonpharmacologic treatment approach to smoking cessation, and patients often express interest in it. Its popularity is understandable because the technique implies results without effort or distress. However, several reviews of the literature have found insufficient evidence that hypnosis offers any additional treatment advantage beyond the behavioral and pharmacotherapeutic interventions that may be administered concomitantly [7,24,37,38]. It is noteworthy that the research literature is lacking in properly controlled studies, and interventions offered by hypnotherapists vary widely in terms of other treatment components. Given the lack of support for their efficacy, hypnosis-based treatments cannot currently be recommended for smoking cessation.

Use of acupuncture for smoking cessation also appears to be growing in popularity. However, the meta-analysis conducted for the clinical guideline found that "active" acupuncture did not outperform "control" acupuncture, suggesting that the technique itself is not a potent intervention [7].

Conclusion

Ms. DeVita attends an 8-week cessation program at the local hospital and is able to quit smoking for 4 months. Then, her mother dies. Due to the stress caused by this event, she relapses and resumes smoking 5 to 10 cigarettes per day. After 6 weeks, she calls Dr. Bronstein, who encourages her to quit before she returns to her prior smoking rate. With a new prescription for bupropion SR, she is able to quit again. Two years later, she is still maintaining abstinence.

By encouraging and helping patients to quit smoking, physicians have the opportunity to greatly enhance the length and quality of patients' lives with relatively little effort or cost. The "5 As" recommended by the clinical practice guideline typically require 3 minutes or less of direct clinician time [7]. The Centers for Disease Control and Prevention calculated that such brief physician counseling costs between $705 and $2058 per life-year gained [15]. Pharmacotherapeutic and intensive clinical interventions range from $2000 to $9000 per life-year gained [15]. These cost-effectiveness estimates compare favorably with prevention strategies for other illnesses. For example, mammography screening for breast cancer costs approximately $60,000 per life-year gained.

Minimal interventions systematically provided to smokers during physician-patient encounters have the aggregate potential to produce a dramatic enhancement of public health in the United States and elsewhere. Although the case discussed in this article involved a routine office visit, physicians and other medical personnel should assess, advise, and assist smokers at every opportunity, including inpatient hospitalizations, emergency department visits, and sick visits. Indeed, patients may be most receptive to smoking-related information

and advice provided during sick visits [39]. Medical facilities should institutionalize procedures for assessing and assisting all patients who smoke.

The U.S. Department of Health and Human Services Clinical Practice Guideline for Treating Tobacco Use and Dependence and related documents can be ordered by phone at 800-358-9295 or obtained by written request to: Publications Clearinghouse, PO Box 8547, Silver Spring, MD 20907. A similar form of this article, entitled "Intervening with the Tobacco-Dependent Patient," was published in the June 2001 (Volume 8, Number 6) issue of the Journal of Clinical Outcomes Management, *a publication of Turner White Communications, Inc.*

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