

# Smoking Cessation: The Importance of Medical Intervention

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Over 100 years ago, the predominant afflictions of patients visiting physicians' offices were acute illnesses led by infectious disease. Infectious disease was the leading cause of death at the turn of the century and because of its epidemic nature, the American medical community developed a standardized assessment to help clinicians confront this disorder. This assessment, known as vital signs, included temperature, pulse rate, respiratory rate, and later, blood pressure (1, 2). Over time, the measurement of vital signs became an expected part of every clinical visit and an essential component of the database physicians use to evaluate, diagnose, and treat patients.

Early in this century, Alton Ochsner made seminal observations regarding the relationship between cigarette smoking and lung cancer (Figure 1) (3). As we enter the next century, American medicine is challenged by the complexity of chronic illnesses, which now predominate as the leading causes of death and disability in Western civilization. Cigarettes are

now responsible for more than 430,000 deaths each year in the United States, costing the United States approximately 50 billion dollars annually in medical care (4). Over the last 60 years since Dr. Ochsner's original observations, it has been proven that cigarette smoking is the cause of 90% of bronchogenic carcinoma and 30% of all cancer deaths each year in this country (5). Furthermore, nearly one in five deaths from cardiovascular disease is attributable to smoking, and an additional 40,000 non-smokers die each year from cardiovascular disease as a result of exposure to environmental tobacco smoke (4).

Because of the epidemic nature that smoking now represents to us as a society, it is important that all physicians and health care providers focus on two key measures in order to reduce the morbidity and mortality associated with smoking as we enter the next century: 1) to assess and document smoking status in all patients under the care of the physician; 2) to learn and use a brief intervention message to help patients quit.



Figure 1. DOONESBURY © 1993 G. B. Trudeau. Reprinted with permission of UNIVERSAL PRESS SYNDICATE. All rights reserved.

## Assessment and Documentation of Smoking Status

At least 70% of smokers see a physician each year, and more than 50% see a dentist (6, 7). Moreover, 70% of smokers report that they want to quit and have made at least one self-described serious attempt to quit (8). Furthermore, smokers cite a physician's advice to quit as an important motivator for attempting to stop. Unfortunately, clinicians are not capitalizing fully on this unique opportunity. Only about half of current smokers report ever having been asked about their smoking status or urged to quit. Fewer still have received specific advice on how to quit smoking successfully.

Because of the epidemic nature that smoking currently represents in the United States, the Agency for Health Care Policy and Research (AHCPR) has advocated making smoking status the "new vital sign" as a simple way of assessing and documenting smoking status for every patient during each clinical encounter (5,9). This small but fundamental change in clinical practice would address a current weakness in the way we practice medicine: the failure to universally assess, document, and intervene in patients who smoke (Figure 2).

Most patients do not object to having their blood pressure measured during every clinic visit, and there are no data to suggest that they would object to the regular assessment of smoking status, particularly if presented in the context of routine preventive care (10, 11). Making smoking status a vital sign would also promote the guidelines of the United States Preventive Services Task Force (12) that "tobacco cessation counseling should be offered on a regular basis to all patients who smoke cigarettes," and the National Health Promotion and Disease Prevention Objectives (13) for the year 2000 to "increase to at least 75% the proportion of primary care and oral health care providers who routinely advise cessation and provide assistance and follow-up for all their tobacco-using patients."

### Learn and Use a Brief Intervention Message to Help Patients Quit

Once aware of the smoking status of their patients, physicians can then focus on moving smokers from the stage of

Vital Signs		
Blood Pressure:	_____	
Pulse:	_____	Weight: _____
Temperature:	_____	
Respiratory Rate:	_____	
Tobacco Use:		
	Current	Former
		Never
	(Circle one)	

**Figure 2. A vital signs stamp or sticker that includes an indication of smoking status should be placed on patient's charts at each clinic visit. (Adapted with permission from: JAMA, 275:1270, 1996. ©1996 American Medical Association).**

contemplating quitting to making an attempt to quit. As the National Cancer Institute's guidelines highlight, "It is essential to provide effective cessation intervention for all tobacco users at each clinical visit." The AHCPR Consensus Statement includes a recommendation for actions and strategies for the primary care physician (Table 1).

### Nicotine Substitution

Nicotine substitution therapy has been the most promising pharmacological method studied to date. The rationale behind nicotine replacement has been to prevent or relieve nicotine withdrawal symptoms while stopping smoking behavior by replacing it with another behavior. Pharmacological nicotine comes in several forms, including nicotine polacrilex gum, nicotine nasal spray, and transdermal nicotine in the form of nicotine patches. The most widely used therapy is the nicotine patch that is now available over the counter in various formats. This form of nicotine substitution has been demonstrated to be two to three times more effective than placebo in maintaining smoking cessation at a six month follow-up (14-16). The 16-hour and 24-hour patches appear equally efficacious, and extending the treatment beyond eight weeks did not appear to increase efficacy in the majority of the patients (14). The clinical guidelines for prescribing nicotine replacement products are highlighted in Table 2, and their use should be encouraged in patients attempting to quit smoking.

### Cigarette Smoking is a Chronic Disease

As with hypertension, diabetes, chronic obstructive pulmonary disease, and congestive heart failure, cigarette smoking can be considered a chronic disease requiring on-going attention and treatment. Since smokers may be at various stages in the quitting process, physicians must continue to assist their smoking patients, often through repeated contacts over many months or years. Recent quitters are at particularly high risk for relapse for several months after quitting (4). As with other chronic diseases, the treatment of cigarette smoking must continue even in the face of very modest cure rates. A realistic smoking cessation rate of 5% to 10% can be expected from a brief clinical intervention and can be essentially doubled if this is combined with nicotine substitution (14). While most physicians would be elated by a 10% remission rate with unmedicated hypertensive patients, many patients become discouraged with smoking cessation interventions because of the high relapse rates. If clinicians universally achieve the 5% to 10% successful cessation rate each year among all of their patients who smoke, the impact would be enormous.

In summary, it is paramount that we identify all of our smokers in our respective practices and interact with them regarding their smoking behavior on each visit. Adding smoking status as a new vital sign will provide the institutional framework by which the epidemic of tobacco use can be universally confronted. With minimal intervention by the physician, and use of appropriate pharmacotherapy, we can expect to make significant reductions in this epidemic going into the new century.

**Table 1. Actions and strategies for the primary care clinician (Adapted with permission from: JAMA, 275:1270, 1996. ©1996 American Medical Association).**

Action	Strategies for Implementation
<b>Step 1. Ask— Systematically Identify All Tobacco Users at Every Visit</b>	
Implement an officewide system that ensures that for <i>every</i> patient at <i>every</i> clinic visit, tobacco-use status is queried and documented. *	<ul style="list-style-type: none"> <li>• Expand the vital signs to include tobacco use. Data should be collected by the health care team. The action should be implemented using preprinted progress note paper that includes the expanded vital signs, a vital signs stamp, or, for computerized records, an item assessing tobacco-use status</li> <li>• Alternatives to the vital signs stamp are to place tobacco-use status stickers on all patients' charts or to indicate smoking status using computerized reminder systems.</li> </ul>
<b>Step 2. Advise— Strongly Urge All Smokers to Quit</b>	
In a <i>clear, strong, and personalized</i> manner, urge every smoker to quit.	<ul style="list-style-type: none"> <li>• Advice should be:  <i>Clear:</i> "I think it is important for you to quit smoking now, and I will help you." "Cutting down while you are ill is not enough."  <i>Strong:</i> "As your clinician, I need you to know that quitting smoking is the most important thing you can do to protect your current and future health."  <i>Personalized:</i> Tie smoking to current health or illness and/or the social and economic costs of tobacco use, motivational level/readiness to quit, and the impact of smoking on children and others in the household.</li> <li>• Encourage clinic staff to reinforce the cessation message and support the patient's quit attempt.</li> </ul>
<b>Step 3. Identify Smokers Willing to Make a Quit Attempt</b>	
Ask every smoker if he or she is willing to make a quit attempt at this time.	<ul style="list-style-type: none"> <li>• If the patient is willing to make a quit attempt at this time, provide assistance (see step 4).</li> <li>• If the patient prefers a more intensive treatment, or the clinician believes more intensive treatment is appropriate, refer the patient to interventions administered by a smoking cessation specialist and follow up with him or her regarding quitting (see step 5).</li> <li>• If the patient clearly states he or she is not willing to make a quit attempt at this time, provide a motivational intervention.</li> </ul>
<b>Step 4. Assist— Aid the Patient in Quitting</b>	
<p><b>A.</b> Help the patient with a quit plan.</p> <p><b>B.</b> Encourage nicotine replacement therapy except in special circumstances</p> <p><b>C.</b> Give key advice on successful quitting</p> <p><b>D.</b> Provide supplementary materials</p>	<ul style="list-style-type: none"> <li>• <i>Set a quit date:</i> Ideally, the quit date should be within 2 weeks, taking patient preference into account.</li> <li>• <i>Help the patient prepare for quitting:</i> The patient must</li> <li>• <i>Inform</i> family, friends, and coworkers of quitting and request their understanding and support.</li> <li>• <i>Prepare the environment</i> by removing cigarettes from it. Prior to quitting, the patient should avoid smoking in places where he or she spends a lot of time (e.g., home, car).</li> <li>• <i>Review</i> previous quit attempts: What helped? What led to relapse?</li> <li>• <i>Anticipate</i> challenges to the planned quit attempt, particularly during the critical first few weeks.</li> <li>• Encourage the use of the nicotine patch or nicotine gum therapy for smoking</li> <li>• <i>Abstinence:</i> Total abstinence is essential. "Not even a single puff after the quit date."</li> <li>• <i>Alcohol:</i> Drinking alcohol is highly associated with relapse. Those who stop smoking should review their alcohol use and consider limiting or abstaining from alcohol use during the quit process.</li> <li>• <i>Other smokers in the household:</i> The presence of other smokers in the household, particularly a spouse, is associated with lower success rates. Patients should consider quitting with their significant others and/or developing specific plans to maintain abstinence in a household where others still smoke.</li> <li>• <i>Source:</i> Federal agencies, including the National Cancer Institute and the Agency for Health Care Policy and Research; nonprofit agencies (American Cancer Society, American Lung Association, American Heart Association); or local and state health departments.</li> <li>• <i>Selection concerns:</i> The material must be culturally, racially, educationally, and age appropriate for the patient.</li> <li>• <i>Location:</i> Readily available in every clinic office.</li> </ul>
<b>Step 5. Arrange— Schedule Follow up Contact</b>	
Schedule follow-up contact, either in person or via telephone.	<ul style="list-style-type: none"> <li>• <i>Timing:</i> Follow-up contact should occur soon after the quit date, preferably during the first week. A second follow-up contact is recommended within the first month. Schedule further follow-up contacts as indicated.</li> <li>• <i>Actions during follow-up:</i> Congratulate success. If smoking occurred, review the circumstances and elicit recommitment to total abstinence. Remind the patient that a lapse can be used as a learning experience and is <i>not</i> a sign of failure. Identify the problems already encountered and anticipate challenges in the immediate future. Assess nicotine replacement therapy use and problems. Consider referral to a more intense or specialized program.</li> </ul>

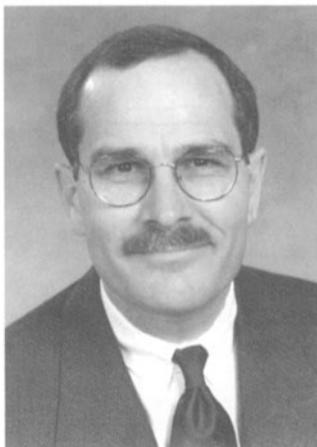
\*Repeated assessment is not necessary in the case of the adult who has never smoked or not smoked for many years, and for whom this information is clearly documented in the medical record.

**Table 2. Clinical guidelines for prescribing nicotine replacement products (Adapted with permission from: JAMA, 275:1270, 1996. ©1996 American Medical Association).**

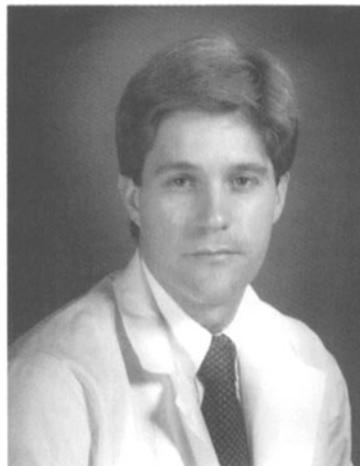
- 1. Who should receive nicotine replacement therapy?**
- Available research shows that nicotine replacement therapy generally increases rates of smoking cessation. *Therefore, except in special circumstances, the clinician should encourage the use of nicotine replacement with patients who smoke.* Little research is available on the use of nicotine replacement with light smokers (i.e., those smoking  $\leq 10$ -15 cigarettes / day). If nicotine replacement is to be used with light smokers, a lower starting dose of the nicotine patch or nicotine gum should be considered.
- 2. Should nicotine replacement therapy be tailored to the individual smoker?**
- Research does not support the tailoring of nicotine patch therapy (except with light smokers as noted above).
  - Research supports tailoring nicotine gum treatment. Specifically, research suggests that 4-mg gum rather than 2 mg gum be used with patients who are highly dependent on nicotine (e.g., those smoking  $>20$  cigarettes / day, those who smoke immediately upon awakening, and those who report histories of severe nicotine withdrawal symptoms). Clinicians may also recommend the higher gum dose if patients request it or have failed to quit using the 2-mg gum.
- 3. Should patients be encouraged to use the nicotine patch or nicotine gum?**
- While both pharmacotherapies are efficacious, panel opinion is that nicotine patch therapy is preferable for routine clinical use. This preference is based on the following comparisons with nicotine gum therapy:
    - Nicotine patch therapy is associated with fewer compliance problems that interfere with effective use.
    - Nicotine patch therapy requires less clinician time and effort to train patients in its effective use.
  - The following factors would support the use of nicotine gum:
    - Patient preference
    - Previous failure with the nicotine patch
    - Contraindications specific to nicotine patch use (e.g., severe skin reactions)

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