

# Tobacco Treatment and Prevention: What Works and Why

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## Introduction

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**Tobacco abuse is one of the main reasons that chronic obstructive pulmonary disease is the fourth leading cause of death in the United States. Many people kick the habit easily, while others struggle through a difficult cycle of addiction. Respiratory therapists often have contact with patients with chronic lung disease who want to quit smoking but do not know where to begin. Smoking bans and clean air laws are in place across the United States, but this is not enough for a complete tobacco treatment and prevention program. For any successful disease-management program, tobacco-control education and support must be included. Studies show that when pharmacologic interventions are used along with the appropriate counseling and other resources, the success of tobacco cessation increases. This must be understood, because if the regulatory efforts of our governing bodies are not enough and if patients do not receive the care that is essential for disease management and rehabilitation, then how will our role as respiratory therapist matter in any health-care system of the future? The respiratory therapist plays a key role in asking patients, especially newly diagnosed patients with chronic lung disease, if they are smokers and if they are interested in tobacco use interventions. This is a role that should not be taken lightly. *Key words: tobacco control, smoking cessation, nicotine dependence, nicotine replacement therapy, tobacco abuse, respiratory therapist, tobacco treatment, chronic lung disease, chronic obstructive pulmonary disease, COPD.* [Respir Care 2009;54(8):1082–1090. © 2009 Daedalus Enterprises]**

The irony is that the tobacco industry uses images of health to sell death, while health organizations use images of death to sell health.

—Yussuf Saloojee  
World Lung Conference  
Cape Town, South Africa, 2007

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## Introduction

Smoking cessation represents one of the first and most important steps a person diagnosed with a chronic lung disease must take. Unfortunately, the powerful addictive qualities of nicotine create a huge hurdle, even for those with a desire to quit. As part of our professional practice, respiratory therapists (RTs) often come into contact with patients who want to quit smoking but do not know where to begin. This review intends to inform RTs of the resources that are available to support successful tobacco-cessation interventions. Smoking bans and their effectiveness, tobacco treatment options, resources and counseling

for smoking cessation, and the RT's role in assisting the patient who wants to stop smoking are discussed.

It is important to address tobacco control and prevention in patients with chronic lung disease, because the quality and quantity of care are not always optimal. This leads to recidivism, has a huge economic impact on hospital care, and, most alarmingly, an inability and/or unwillingness of many smokers to adhere to prescribed tobacco-control prevention interventions.

### Smoking Bans

Tobacco plants are native to Ecuador and Peru, where it has been found since prehistoric times. Early explorers, such as Christopher Columbus in 1492, brought tobacco back to Europe from Cuba, where it was adopted by society and then re-exported all over the world through European colonization.<sup>1</sup> Not long after the spread of tobacco consumption came the first smoking ban on cigarettes, which occurred in the late 1550s when Pope Urban VII threatened to excommunicate anyone who "took tobacco in the porch way of or inside church, whether it be by chewing it, smoking it with a pipe, or sniffing it in powdered form through the nose."<sup>2</sup> European and other countries, including the United States, also banned smoking until the 1700s. However, when trade in tobacco became an important source of revenue for governments, such smoking bans were revoked. The first federal excise tobacco tax was introduced to help finance the Civil War in 1862. After the Civil War, moral and religious arguments against smoking led to several states placing total bans on the sale, manufacture, possession, and use of cigarettes. This trend continued until the early 1900s, when mass media helped to push the newly mass-produced cigarette over cigar and pipe use in changing consumer tastes.

Nazi Germany initiated the first public anti-smoking campaign supported by any government in modern history. This was the strongest, most powerful anti-smoking movement in the world, with the Nazis condemning smoking and criticizing public tobacco use.<sup>3</sup> Major anti-tobacco broadcasts began in the 1930s, and this progressed to bans on smoking in public spaces, bans on advertising, restrictions on tobacco rations for women, and the world's most

refined tobacco use epidemiology, linking the emerging evidence of tobacco abuse to lung cancer as early as 1929.<sup>4</sup> Fritz Lickint of Dresden published the first formal statistical evidence of a lung cancer-tobacco link, based on a case series showing that lung cancer sufferers were likely to be cigarette smokers. Lickint was also the first researcher to use the term "passivrauchen" (passive smoking).<sup>5</sup> After World War II all bans on tobacco were lifted, and in the recent past both European and American tobacco companies have tried to play the Nazi card, associating tobacco control with Nazi-policing policies. The irony of this time in history is the fact that Hitler and Mussolini were ardent non-smokers while Roosevelt, Churchill, and Stalin were all heavy smokers.

Today, several countries around the world are banning smoking in the indoor and outdoor work place and hospitality venues. In the United States, almost all states have some form of clean indoor air law, with some states more stringent than others. The smoking ban of today increases the stigma and hassle of smoking, and removes some of the social cues for lighting up. Those who advocate against these restrictions and bans argue that these laws only displace smoking from the workplace and into the home, thereby harming children even more, plus the risk of an increased incidence of house fires.<sup>6</sup> Evidence is beginning to emerge that shows that modern-day restrictions and bans are effective in terms of tobacco control.<sup>7-12</sup> For instance, Farrelly and his co-authors<sup>9</sup> in 1999 found in a national survey from workers' self-reported characteristics that there are 4 main types of workplace smoking ban. These range from 100% smoke-free environments to minimal or no restrictions. By 1993, 82% of indoor workers faced some restrictions on workplace smoking, and 47% worked in 100% smoke-free environments. They further state that having a 100% smoke-free workplace decreased smoking prevalence by 6% and average daily consumption among smokers by 14%, relative to workers subject to minimal or no restrictions. Another example is the Joint Commission's requirement in 1992 that all hospitals be smoke-free. Keeping hospitals smoke-free has decreased the number of fires reported in hospitals. Maybe even more crucial is the reduction in smoking rates among health-care providers and eliminating the exposure of patients and staff to second-hand smoke. In 2007 the median prevalence of adult current smoking in the 50 United States and the District of Columbia was 19.8%,<sup>13</sup> while the smoking prevalence of health-care practitioners is currently 4%.<sup>14</sup>

In July 2003, New York implemented a comprehensive state law requiring almost all indoor workplaces and public places (eg, restaurants, bars, and other hospitality venues) to be smoke-free. A study of the changes in air quality one year after the ban in western New York found that particulate matter from burning cigarettes was substantially lower (84%) in every venue where smoking or in-

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direct second-hand smoke exposure had been observed at baseline.<sup>7</sup> Another New York study on second-hand smoke measured cotinine in saliva among selected nonsmoking respondents before and after implementation of the 2003 New York state ban on smoking in indoor workplaces and public places. It was reported that from 2002 to 2006 indoor smoking among restaurant and bar patrons decreased significantly, with saliva cotinine levels decreasing by 47% over the same period.<sup>12</sup> A similar study in Massachusetts found similar results in air quality and also noted that there were no negatively affected economic indicators as a result of the ban.<sup>15</sup> These findings suggest that comprehensive smoking bans can reduce second-hand smoke exposure among nonsmokers and decrease tobacco consumption in smokers.

The one exception to the effectiveness of smoking bans is found in the area of psychiatry services. It has been shown that patients have difficulty adjusting to smoking bans in in-patient units.<sup>16,17</sup> Smoking appears to play a central role in social exchanges on the ward, with mental-health staff frequently using cigarettes to reinforce certain behaviors. “Self-medication” and “individual rights” are used to rationalize allowing tobacco use and therefore limited smoking-cessation programs or tobacco-prevention interventions are available in these treatment settings. Despite current guidelines, mental-health professionals rarely address nicotine use among their patients.<sup>18</sup> Tobacco prevention and cessation should be a key component of in-patient treatment planning, because this setting provides a safe and timely opportunity to help patients quit.

Many chronic lung patients counseled by RTs are retired or are no longer able to work, so workplace smoking bans are not relevant to them. Clean indoor air quality is important as they go to hospitality venues or other public places. However, to effectively make a difference in decreasing smoking prevalence, RTs must be aware that, despite the evidence of smoking bans in the workplace or clean indoor air laws, this is not enough. A combination of tobacco-control policies is needed. Higher excise taxes on cigarettes as well as strict and enforced clean indoor air acts are needed to have the greatest impact.<sup>19</sup>

### **Current Pharmacologic Options to Assist Quitting Tobacco**

All medications have potential adverse effects, and those used to augment tobacco-cessation programs are no exception. The primary rationale for using these pharmacologic adjuncts is that most, if not all, are clearly safer than continuing to use tobacco. Compared to placebo alone, first-line medications are modestly effective, but they can substantially enhance behavioral treatment.<sup>20</sup> Besides decreasing withdrawal symptoms and craving, pharmacotherapy decreases the short-term reinforcing effects of to-

bacco. This form of relief can help ease the process of a patient learning new coping skills. The addition of a pharmacologic agent to a quit plan can have a positive psychological impact on those making quit attempts, especially if previous quit attempts went poorly.

The United States Department of Health and Human Services Public Health Service 2008 update of the Treating Tobacco Use and Dependence clinical practice guidelines categorizes pharmacotherapy into first-line and second-line medications, and also discusses combination medications.<sup>20</sup> All first-line medications appear to be of similar effectiveness, but there have been few direct comparisons. First-line medications include nicotine-replacement therapy (NRT), bupropion SR (sustained release), and varenicline. Second-line medications include clonidine and nortriptyline. Table 1 lists the typical dose and use of these medications as monotherapies (dosage recommendations follow the Public Health Service 2008 update of the Treating Tobacco Use and Dependence clinical practice guidelines, except where indicated).

NRT is the most common medication used to assist quit attempts, for several reasons. It has been used far longer than other quit drugs and therefore we have much more data about how to use it, its effectiveness, and safety.<sup>21</sup> It works by agonizing the  $\alpha_4\beta_2$  nicotinic receptor in the ventral tegmental area of the brain, which in turn stimulates the pleasurable effect of dopamine production in the area of the forebrain called the nucleus accumbens.<sup>22,23</sup> It primarily works by reducing withdrawal symptoms and may reduce negative mood; it helps maintain serum nicotine levels near normal, and helps suppress weight gain associated with tobacco cessation. If NRT via transdermal patch is used, the constant delivery of nicotine helps desensitize receptors to nicotine from smoking. Some forms of NRT may replace oral and handling aspects (physical sensation from manipulating tobacco) of the habit (gum, inhaler, lozenge). Clinicians often equate 1 mg of NRT for each cigarette smoked but that is an “off-label” estimate. The Public Health Service prescribing guideline does not officially recommend using NRT while smoking; however, it is not uncommon for patients to be started on NRT 2 weeks prior to their quit date.

In general NRT is considered safe for most patients.<sup>24</sup> Some of the contraindications and warnings for NRT include history of myocardial infarction within the past 6 weeks, uncontrolled hypertension (or hypertension that emerges during treatment), severe dysrhythmia, or unstable angina. Severe chronic obstructive pulmonary disease (COPD), uncontrolled diabetes mellitus (nicotine can impair insulin sensitivity in type II diabetes mellitus), and other forms of cardiovascular disease may be contraindications, though the risks have to be weighed against a continued smoking habit.<sup>25,26</sup> NRT interaction with other drugs is possible, such as an increase in blood pressure

TOBACCO TREATMENT AND PREVENTION: WHAT WORKS AND WHY

Table 1. Smoking Cessation Medications\*

Medication	Dosage	Use
Nicotine replacement therapy		
Patch	Start at 21 mg unless patient weighs < 100 pounds or has adverse effects 14 mg if < 10 cigarettes/d <i>Some don't use 7 mg</i> <i>Heavy smoker ≥ 21 mg</i>	Apply in morning Most brands wear for 24 h Remove at night if sleep disturbance Use 10–12 wk [ <i>Some use longer</i> ]
Gum	2 mg for < 25 cigarettes/d 4 mg for ≥ 25 cigarettes/d	One piece every 1–2 h or one piece for every 1–2 cigarettes/d; at least 8–10/d Use 12 wk, <i>longer if needed</i>
Lozenge	4 mg for those who smoke within 30 min of awakening 2 mg for those who smoke ≥ 30 min after awakening Up to 20/d; 5 per 6-h period	Start on quit day, 12 wk duration No eating or drinking 15 min before use <i>One lozenge per 1–2 cigarettes</i> At least 8–10 lozenge/d Taper over time
Inhaler	Can use 6–16 per day Inhale 80 times/cartridge	Begin on quit day Inhale into mouth (not lungs), hold, exhale Cartridge yields 20 min of continuous use Cartridge good for 24 h once opened 12 wk of primary treatment, <i>can taper over 6–12 additional wk</i> Stop use if not abstinent in 4 wk
Nasal Spray	Maximum of 40 doses per day (1 dose = 1 spray in each nostril) Generally 1–2 doses per h; <i>maximum 5</i> <i>Most average 1 dose per hour</i>	Begin on quit day Recommended duration 3–6 months (reported use range 12 wk to 12 mo) Do not inhale to lungs while spraying Stop if not abstinent in 4 wk
Bupropion SR/XL (aka Zyban, Wellbutrin)	<i>With XL, take one 300-mg pill per day</i> SR 150 mg twice daily Quit date should be 7 d (PDR) or 14 d (guideline) after initiating bupropion treatment	First 3–7 d: 150 mg per day Afterwards: 300 mg per day Active treatment: 7–12 wk (up to 6 mo) Discontinue if no progress within 7 wk Tapering not necessary
Varenicline (Chantix)	Set quit date 1 wk (PDR) to 2 wk ( <i>emerging consensus</i> ) after initiating Take after eating, with a full glass of water	Days 1–3: 0.5 mg/d (morning) Days 4–7: 0.5 mg twice a day Afterwards: 1 mg twice a day Consider 0.5 mg twice a day if nauseated or otherwise indicated Active treatment: 12 wk; consider additional 12 wk for maintenance Discontinue if not abstinent within 12 wk
Nortriptyline	Set quit date for 1–3 wk after initiating Take with a full glass of water.	Begin at 25 mg/d Gradually increase to 75–100 mg/d Active treatment: 12 wk (up to 6 mo)
Clonidine	Set quit date 1 wk after initiating Take after eating, with a full glass of water	Oral: 0.10 mg/d Increase by 0.10 mg/d as needed up to 0.75 mg/d Transdermal: 0.10 mg/d Increase to 0.20 mg/d as needed Active treatment: up to 10 wk

\* Adapted from Reference 20. The italicized items are from the ACT Center for Tobacco Treatment, Education, and Research, Tobacco Dependence Intervention System 2008 Certification Program for Tobacco Treatment Specialists workshop (<http://actcenter.unc.edu/center.html>).  
PDR = Thomson *Physicians' Desk Reference*

when combined with bupropion or the necessity of adjusting the dosage of drugs taken concomitantly, such as insulin, benzodiazepines, caffeine, and ergot. Vivid dreams or insomnia may indicate too high an NRT dose, whereas application-site reactions/irritation may indicate the need for a different type of vehicle for NRT.

The various vehicles for NRT each have their advantages and disadvantages. The most common form of NRT is the transdermal nicotine patch, which has been available for more than 15 years. It has the benefit of a once-a-day application and is available in different strengths. An emerging trend involves increasing the NRT patch dosage beyond the usual 21-mg patch over a 24-hour period for heavy tobacco users.<sup>27</sup> In effect, the goal is to provide the dosage necessary to match the nicotine level to which the body is accustomed. Although it is possible to titrate the NRT patch dosage to the "average" nicotine level obtained by tobacco use, the patch maintains a relatively constant level of nicotine in the bloodstream, which is not like the short, intense surges of nicotine obtained by smoking. Other forms of NRT are more like the intermittent pattern observed with smoking but do not come close to the rapid intensity characteristic of the most efficient nicotine delivery device available, the modern cigarette. In fact, chemicals such as ammonia have been added to cigarettes to enhance the quick release of nicotine from its base form to heighten its rapid delivery to the pulmonary capillaries (similar to free-basing opioids for rapid effect). Patients should be advised that NRT will help diminish nicotine craving to make it manageable but will not completely eliminate it. Nicotine patches are available in prescription and over-the-counter forms. Keep in mind that it may be less expensive for patients with a prescription drug benefit to use the prescription form of the drug. Also, the rate-limiting patch membrane differs by brand, and some perform better and/or have less irritation than others.

Nicotine "polacrilex" identifies nicotine compounded in a resin carrier, which can be in the form of gum or a lozenge. Given equivalent packaged doses of nicotine in gum and lozenge form, clinicians often estimate a 25% higher nicotine delivery from a lozenge. Both forms of polacrilex come in different flavors and most are sugarless, but users should abstain from eating and drinking just before and during use, and avoid acidic food and drink (coffee, carbonated beverages). The nicotine inhaler is not a pressurized metered-dose inhaler; rather it is a cartridge, which the user must actively inhale from to receive a nicotine vapor (absorbed primarily in the mouth and throat instead of the lungs). This NRT vehicle is a good oral substitute and may provide some handling satisfaction, but because of its lower dose delivery it may not be a good option as a monotherapy for heavy tobacco users. Nicotine nasal spray is a less common form of NRT but is sometimes a good option to consider for highly addicted to-

bacco users because of the ability to deliver high doses in an ad lib manner; however, it is costly and can cause substantial nasal and sometimes eye irritation.

Bupropion (Zyban, Wellbutrin, GlaxoSmithKline, Philadelphia, Pennsylvania), previously known as amfebutamone, can reduce the severity of nicotine cravings and withdrawal symptoms by acting as a dopamine reuptake inhibitor and a nicotinic antagonist.<sup>28,29</sup> When used for tobacco dependence treatment, the 2 sustained-release formulations of bupropion are preferred over the immediate release. Bupropion SR is taken twice daily, and bupropion XL is taken once daily. When used at an antidepressant dose of 450 mg, the risk of seizure is increased, but the lower dose used for tobacco treatment (300 mg or less) has little risk of seizure (none reported). Bupropion should not be mixed with alcohol use (> 3 drinks per day) or when alcohol use has been abruptly ended, nor should it be used with pregnant women. Agitation is an adverse effect that can be mostly avoided by waiting 7 days to increase from 150 mg to 300 mg daily dose, instead of 3 days. The typical treatment period is 7–12 weeks, and tapering is not necessary. Unlike other antidepressants, bupropion typically does not cause weight gain (and may suppress it) or sexual dysfunction, so it may be especially of interest to those patients concerned about weight gain when quitting smoking.

Varenicline (Chantix, Pfizer, Mission, Kansas) is a newer medication for treating tobacco addiction that reduces craving and withdrawal. It partially agonizes the  $\alpha_4\beta_2$  nicotinic receptors in the ventral tegmental area (like nicotine but to a lesser degree) but also antagonizes nicotine at the same site, which reduces the pleasurable effects of tobacco products.<sup>30-32</sup> Therefore it works by different mechanisms than bupropion and NRT. The most commonly reported adverse effect is nausea (in about 30%, with the majority rating it as mild), though less than 3% discontinued due to nausea in clinical trials.<sup>29</sup> Those who experience nausea generally find it short-lived, and taking varenicline after eating with a full glass of water helps to reduce this adverse effect. Less frequent adverse effects include vivid dreams, constipation, and flatulence. Varenicline has a low burden on the kidney and liver and may be used in end-stage renal disease with a reduced dosage. The Food and Drug Administration (FDA) released 2 alerts (most recent was February 2008) based primarily on reports of mood alterations and suicidal thoughts and behavior purported to be associated with varenicline (refer to <http://www.fda.gov/safety/medwatch/safetyinformation/safetyalertsforhumanmedicalproducts/ucm106540.htm>). Patients should be asked to report any history of psychiatric illness prior to starting varenicline and monitoring patients on this medication for changes in mood and behavior. It is important to note that these are anecdotal reports and that a causal relationship to varenicline cannot be confirmed or com-



pletely ruled out. In clinical trials, rates of behavioral change seen with varenicline were similar to placebo. The current recommendation is to start medication one week prior to quit date, but an emerging trend is to start 2 weeks prior because full therapeutic effect may not occur until after a few weeks. Phase 3 studies showed significantly higher abstinence rates with varenicline, compared to bupropion and placebo.<sup>33,34</sup>

Nortriptyline is a second-generation tricyclic antidepressant used in the treatment of major depression. It is recommended as a second-line medication in the Public Health Service guideline 2008 update, but is not approved by the FDA for treatment of tobacco dependence. Unlike bupropion, at least part of nortriptyline's therapeutic effect on tobacco dependence may be due to its antidepressant action.<sup>21</sup> Because nortriptyline can have a sedating effect, it may be more practical to take in the evening. As is typical with antidepressants, there are a number of potential adverse effects, including dizziness, tremor/weakness, insomnia, blurred vision, tinnitus, constipation, nausea, and rash. Considerable caution should be exercised when considering it for patients with cardiovascular disease, since it can increase the risk of dysrhythmia.<sup>20</sup> A thorough review of patient medications is needed, because nortriptyline can interact with a considerable number of medications. Nortriptyline is typically started earlier than other tobacco-cessation medications (up to 3 weeks prior to quit date), to allow for a gradual increase to full dosage. As with varenicline, the nortriptyline should be taken with a full glass of water.

Clonidine, also a second-line tobacco-cessation drug (not FDA-cleared for this use), was approved as an anti-hypertensive but has also been shown to be effective in reducing symptoms of opioid and alcohol withdrawal.<sup>20</sup> It can be taken orally or via transdermal patch and is typically started a week prior to quit date. Possible adverse effects include drowsiness, dizziness, fatigue, agitation, depression, constipation, nausea, weight gain, and others. Abrupt discontinuation can result in nervousness, agitation, headache, tremor, and rapid rise in blood pressure.<sup>21</sup> There is less interest in clonidine as a tobacco-cessation aid, compared to other medication choices, because a specific dosing regimen for tobacco cessation has not been established and there are several important drug interactions and medical precautions to be carefully considered.

The various tobacco-cessation medications have some common adverse effects that are managed differently depending on the medication. For insomnia with NRT, remove the patch one hour prior to bedtime or reduce dose; if using bupropion, separate doses by at least 8 hours, with the last dose no later than 4 PM, or reduce the dose; and if using varenicline, the insomnia may diminish with time or the dose can be reduced. Unusual or vivid dreams that may occur with NRT and varenicline often diminish with time

but can also be diminished by removing the NRT patch one hour prior to bedtime or by reducing the varenicline dose. If irritability is a problem, consider reducing the dose if using bupropion or increasing the dose if using NRT (may be due to insufficiently covered withdrawal symptom). Dizziness occurring from NRT may be a sign that the dose should be reduced.

Combination pharmacotherapy for tobacco treatment is not FDA-cleared, but with proper screening it appears to be reasonable (no evidence of danger) and it may improve outcome in some cases.<sup>20</sup> Using NRT patch and supplementing with gum, lozenge, nasal spray, et cetera, is not uncommon and has been shown to be effective. Bupropion with NRT makes intuitive sense but there are limited data to support it. Varenicline with NRT was initially not thought to be an option (theoretically); however, clinical experience shows adding NRT as needed may be helpful for breakthrough cravings in some patients. Although the idea of combining varenicline and bupropion is intriguing, this has not been tested. Nortriptyline plus NRT patch was found to be effective based on 2 studies, but no more so than other therapies.<sup>21</sup>

A new form of NRT is the sublingual tablet. It is unclear whether it represents an improvement over the NRT lozenge. A new therapy under development is the nicotine vaccine (more than one form). The vaccine furthest along in development is NicVAX (Nabi Biopharmaceuticals, Rockville, Maryland), a nicotine conjugate vaccine that has completed phase 2 trials and is poised to start phase 3. The vaccine works by creating antibodies that bind to nicotine molecules, making them too large to cross the blood-brain barrier and enter the brain. Therefore, if someone were to use tobacco during a cessation attempt, they would not receive the chemical reward. Although the vaccine is designed to counter nicotine addiction, it does not prevent psychological cravings. In theory, this type of vaccine may also help prevent future relapse from an occasional cigarette because it is supposed to remain effective for 6–12 months after start.<sup>21</sup>

### Resources for Quitting

RTs involved with tobacco control and prevention should be familiar with resources to offer or direct patients to when asked. Some of the more well known and oldest structured smoking-cessation programs are from the American Lung Association and the American Cancer Society. "Freedom From Smoking" is a 7-week free on-line program from the American Lung Association. Topics covering stress management/relaxation techniques, physical and psychological recovery symptoms, coping with triggers, nicotine-reduction therapy, and staying smoke free are spaced over the 7-week period. Information is found at <http://www.ffsonline.org>.

“Fresh Start” is a 4-week program sponsored by the American Cancer Society, consisting of 4 face-to-face meetings during a 2-week period. The course is generally offered as a benefit free of charge to smokers wanting to quit in the workplace or through medical facilities. A facilitator guides the group interaction through quitting strategies, with individual situations given more attention than the group process. Topics covered include the reasons people smoke, NRT, strategies to overcome cravings, and psychological dependence. Information can be found at [http://www.cancer.org/downloads/gahc/hp\\_freshstart\\_brochure.pdf](http://www.cancer.org/downloads/gahc/hp_freshstart_brochure.pdf). Both the “Freedom From Smoking” and “Fresh Start” programs ask participants to set a quit date. This is typically at the end of the structured program. Follow-up to the participants by the facilitators occurs for about a month after the program to track progress and to offer counseling. Smokers may need to decide which program is best for them in terms of learning styles, schedules, et cetera. Both programs incorporate problem-solving/training skills and offer supportive treatment, which can be effective if the smoker is ready to quit and is committed to stopping.

Quit lines funded by the states with tobacco-settlement funds offer free coaching sessions and resources to quit. The American Lung Association’s Web site has a map of the United States that lists all smoking-cessation resources in 2008 (see [http://www.lungusa.org/site/c.dvluk9o0e/b.4724127/k.eb9f/nationwide\\_smoking\\_cessation\\_resources\\_2008.htm](http://www.lungusa.org/site/c.dvluk9o0e/b.4724127/k.eb9f/nationwide_smoking_cessation_resources_2008.htm)). Other information offered on that site includes Medicaid coverage of NRT, state-employee health-plan coverage, and other American Lung Association resources. Telephone counseling can be effective and increases as treatment intensifies. Counseling is especially helpful when patients who are attempting to quit are offered practical strategies and social support.<sup>35</sup>

The Centers for Disease Control and Prevention Web site (see <http://www.cdc.gov/tobacco>) is the most comprehensive source for information. The National Tobacco Control Program is outlined, as well as best practices, smoking-cessation program materials, and podcasts. The Web site has a link to the most current and thorough clinical practice guideline<sup>20</sup> to date, which was printed in executive-summary form in *RESPIRATORY CARE*,<sup>36</sup> and the full report was printed in the *American Journal of Preventive Medicine*.<sup>35</sup>

### What Works, What Doesn’t Work

Given the history of smoking bans, tobacco-treatment options, various resources available, and new research, what are the key recommendations for tobacco prevention and treatment? There is a growing body of evidence that reviews, analyzes, and describes the effectiveness of various treatments, assessments, and implementation strategies. Even paying smokers to quit boosts success rates by

15% after one year of cessation.<sup>37</sup> There is also evidence in the literature of how the tobacco industry is trying to recapture young adults and other recent quitters.<sup>38</sup> RTs should review the 10 key guidelines and editorial published in this journal<sup>36,39</sup> and other medical literature sources<sup>20,35</sup> and know the 5 Rs to enhance motivation to quit: Relevance, Risks, Rewards, Roadblocks, and Repetition. Most RTs will need training in order to fully understand this method of motivation interviewing. Research suggests that these 5 Rs enhance future quit attempts.<sup>40,41</sup>

### The Role of the Respiratory Therapist

As RTs, what is our role in the care of patients who have complications of chronic lung disease due to a life of smoking? How can RTs change and/or adapt to a newer paradigm for the care and management of patients with COPD? What obligations do we have to this population of patients, who are so vulnerable because of an insidious addiction to nicotine? In our opinion, one answer is to take the subject matter presented and translate this into practice, such that clinical outcomes are improved. This is important because Mularski et al<sup>42</sup> inform us that Americans with COPD receive only 55% of recommended care. COPD patients have not benefited as best they could from the available resources, especially while recovering from an exacerbation-induced hospitalization. This in spite of the evidence from the National Heart, Lung, and Blood Institute and World Health Organization for disease-management strategies in the treatment of COPD in the Global Initiative for Chronic Obstructive Lung Disease (GOLD) report.<sup>43</sup> RTs who incorporate the GOLD strategies, which include tobacco control and prevention strategies, into their daily practice in the care of patients with chronic respiratory conditions should see ample improvement. This is evident from a European study published in *Chest*,<sup>44</sup> which shows that smokers are more likely than nonsmokers to develop postoperative complications, but smoking-cessation counseling prior to scheduled surgery could reduce complications and save money. The role of the RT is critical in understanding the quality-improvement efforts to decrease the deficits that these chronic lung patients experience.

In education, there are “teachable moments” whereby the situation or circumstance to teach takes precedent over other planned activities of that moment. This is a great opportunity for the RT. As changes are occurring in our practices because of economic pressures, this is a positive change we can make for our patients and our workplaces. We are in a unique position to offer tobacco-use-prevention advice and to provide information on smoking-cessation resources to our patients. If you do not ask your patient if he or she is a smoker, you are missing a key vital sign in your assessment. If you do not ask your patient if

he or she is a smoker, you are missing an opportunity for tobacco-use-cessation counseling; therefore you are not offering established standards of care, but substandard care. If you do not ask your patient if he or she is a smoker, you should realize that it is no longer clinically appropriate nor economically sustainable to continue the same mindset of simply treating the acute respiratory failure episode and then discharging the patient home only to wait for the next relapse. If you do not ask your patient if he or she is a smoker, you are not taking on a role that needs you.

Another key element of tobacco control that pertains only to approximately 4% of all health-care providers in the United States is the role of smoker.<sup>14</sup> If you are a smoker, become an ex-smoker. Now is the time to finally stop. By quitting your own addiction, becoming skilled at tobacco abuse counseling, and engaging in social and political action against tobacco, you take on a role that is vital to minimizing and preventing tobacco's terrible toll of death and disability. If advocacy is not for you in a public arena, at least become a role model for respiratory therapy students, who often do not receive adequate tobacco control and prevention counseling or formal training in the treatment of nicotine dependence in their education programs. Share your success story and be an inspiration to someone having a difficult time with their own tobacco control.

The future is promising but the challenge is to make sure that COPD patients are able to access resources such as pulmonary rehabilitation, smoking cessation, and appropriate oxygen therapy. If a COPD patient has an RT who is using the latest evidence-based guidelines regarding tobacco abuse and relapse, and if continuing contact to tobacco exposure is decreased, health outcomes are dramatically improved, in large part due to the role of the RT. This is a role that should not be taken lightly.

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