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The role of advanced practice psychiatric nurses in treating tobacco use and dependence.

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Journal

Archives of psychiatric nursing, 15(3)

ISSN

0883-9417

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Publication Date

2001-06-01

DOI

10.1053/apnu.2001.23749

Peer reviewed

The Role of Advanced Practice Psychiatric Nurses in Treating Tobacco Use and Dependence

Janine K. Cataldo

Tobacco use is treatable and the benefits of smoking cessation are impressive, yet like other health care providers, psychiatric nurses have failed to consistently assess and treat tobacco use effectively. Tobacco use continues to cause illness, disability, and death at unprecedented rates. Nicotine addiction is drug abuse and it is a chronic disease and needs to be treated as such. There are clear health benefits to smoking cessation regardless of the age of smoking initiation or the age of smoking cessation. Advanced practice psychiatric nurses (APPNs) are in a unique position to make an impact on a smoker's risk of suffering from tobacco-related diseases: the treatment of choice is the combination of pharmacotherapy and psychosocial interventions, both within the realm of APPN practice; psychiatric and substance abusing patients consistently demonstrate increased rates of cigarette smoking compared with healthy controls; and tobacco use is drug abuse, a treatable chronic disease. The ability of APPNs to deliver psychotherapeutic and pharmacologic care secures a position in the forefront of treating tobacco use. In addition to intervention, psychiatric nurses need to step up and take an active role in initiating and supporting tobacco control policy and legislation.

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DESPITE THE physical, emotional, and societal devastation caused by tobacco dependence all health care providers, including psychiatric nurses, fail to treat tobacco use consistently and effectively. This failure exists in the face of substantial evidence that nursing interventions for smoking cessation are effective (Sarna, 1999; Wewers, Ahijevych, & Sarna, 1999). This article will provide information about nicotine dependence, the health consequences associated with tobacco use, and the benefits associated with smoking cessation. A discussion is presented highlighting the reasons why advanced practice psychiatric nurses (APPNs) are in a unique position to make an impact on a smoker's risk of suffering from tobacco-related diseases: the treatment of choice is the combination of pharmacotherapy and psychosocial interventions, both within the realm of APPN practice; psychiatric and substance abusing patients consistently demonstrate increased rates of cigarette smoking compared with healthy controls;

and tobacco use is drug abuse, a treatable chronic disease. Interventions to promote smoking cessation and tobacco control, based on the U.S. Public Health Service Report on The Clinical Practice Guidelines for Treating Tobacco Use and Dependence, will be reviewed (Fiore, 2000). Barriers that interfere with APPN's assessment and treatment of smokers will be explored and policy implications will be discussed.

SMOKING PREVALENCE

In the United States the prevalence of smoking reached a peak in 1964, 40% of all adult Ameri-

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0883-9417/01/1503-0003\$35.00/0
doi:10.1053/apnu.2001.23749*

cans, 60% of men, smoked. By 1997, the smoking prevalence had decreased by 23% (World Health Organization, 1999). An estimated 48 million (24.7%) adults currently smoke in the United States (27.6% of men and 22.1% of women). Adult cigarette smoking prevalence has remained essentially unchanged in the 1990s (25% in 1993 and 24.7% in 1997) and fell short of the nation's public health goal of reducing smoking to no more than 15% by the year 2000. In 1997 an estimated 44 million adults were former smokers, which remained unchanged from 1995 (Centers for Disease Control and Prevention [CDC], 1999a). Previously, smokers aged 25 to 44 years had the highest smoking prevalence; however, smokers age 18 to 24 and 25 to 44 years are smoking at equal rates in 1997 (28.7% and 28.6% respectively) (CDC, 1999a). These prevalence rates of current smoking highlight the increase in the number of youths choosing to use tobacco. Recent trend analyses indicate that the prevalence of smoking among high school students has increased significantly from 27.5% in 1991 to 36.4% in 1997 (Wingo et al., 1999). Similarly, total cigar consumption in the United States was approximately 5.3 billion cigars in 1998. Overall cigar consumption in the United States declined during the 1970s and 1980s but has been increasing in the 1990s (National Cancer Institute [NCI], 1998).

Although social awareness of the adverse effects of tobacco smoking has increased since the Surgeon General of the United States warned of the hazards, the prevalence of smoking remains unacceptably high (United States Department of Health Education and Welfare, 1964). Psychiatric nurses can make important contributions to health promotion through interventions that are directed toward smoking prevention, cessation, and tobacco control.

NICOTINE DEPENDENCE IS DRUG ABUSE

Nicotine is a poisonous alkaloid derived from tobacco that is rapid acting with diverse neuroregulatory effects, making it a perfect substance for abuse. Nicotine is available on demand and has effects that rarely outlast the circumstances that prompt its use (Pomerleau & Pomerleau, 1984). Only recently has nicotine dependence resulting from tobacco use been classified as drug abuse, in part because the harm to health was not widely

recognized and because the habit was not associated with obvious intoxication or socially deviant behavior (Pomerleau, 1997). In 1988 the United States Surgeon General's Report on the Health Consequences of Smoking (US Department of Health and Human Services [USDHHS], 1988) summarized the cumulative findings of more than 2,500 scientific papers which led to the unequivocal conclusion that cigarettes and other forms of tobacco are addicting. The report identified nicotine as the drug in tobacco that causes addiction, and that the pharmacological and behavioral process that determine tobacco addiction are similar to those that determine addiction to other drugs such as heroin and cocaine.

Nicotine is a potent central nervous system drug that activates the mesolimbic dopamine system. Nicotine is known to stimulate dopamine release in the nucleus accumbens, which is a neurobiologic hallmark of addiction. Most, if not all drugs abused by humans stimulate dopamine transmission in the nucleus accumbens (Ascher et al., 1995). The mesolimbic dopaminergic system has been shown to play an important role in mediating the reinforcing effect of natural rewards as well as that of various drugs of abuse (Fibiger & Phillips, 1987).

Nicotine dependence involves a pattern of heavy consumption that is resistant to change, includes nicotine tolerance and the regulation of nicotine intake within relatively narrow limits (Pomerleau, Fertig, & Shanahan, 1983). Also, abstinence from nicotine produces withdrawal symptoms that usually peak in 2 to 3 days and dissipate over a few months, intensity and duration of symptoms varies (Pomerleau, 1997).

The primary reasons people give for smoking include: stimulation (increased energy), sensorimotor stimulation (handling the cigarettes), relaxation, habit (smoking automatically), reduction of negative affect (tension, anxiety, anger, boredom, frustration) and addiction (smoking to avoid withdrawal symptoms) (Pomerleau, 1997). Nicotine alters the bioavailability of numerous behaviorally and physiologically active neuroregulators, which can be used by smokers to produce a variety of transient effects (Breslau, 1995; Pomerleau, 1997; Pomerleau & Pomerleau, 1984).

Earlier theories of nicotine addiction focused on negative reinforcement, relief from withdrawal as the force driving nicotine consumption. These

early theories conceptualized smoking as an escape-avoidance response to aversive consequences caused by nicotine abstinence. Although this evidence was supported, the analysis of recidivism and retrospective examination of factors related to craving and the situations that cue smoking revealed factors independent of nicotine dependence that control smoking behaviors (Pomerleau & Pomerleau, 1984). Smokers also report that some cigarettes are smoked for pleasure and perceived improvement in affect and performance. Therefore, cognitive demands and affective states can be modified in a favorable or adaptive way and serve as prompts for smoking. A vast number of external and internal events unrelated to the nicotine addiction cycle serves as cues for smoking, explaining how the habit can become so thoroughly woven into the patterns of daily living (Pomerleau & Pomerleau, 1984).

HEALTH CONSEQUENCES OF TOBACCO USE

Tobacco smoking is the single most preventable cause of premature death in the United States. One in every five deaths in the United States is smoking related; 430,000 Americans a year die from smoking (CDC, 1999a). Approximately 10 million people in the United States have died from causes attributed to smoking since the first Surgeon General's report on smoking and health in 1964, with 2 million of these deaths being from lung cancer alone (CDC, 1993a). Men who smoke increase their risk of death from lung cancer by more than 22 times and from bronchitis and emphysema by nearly 10 times. Women smokers increase their risk of dying from lung cancer by nearly 12 times and the risk of dying from bronchitis and emphysema by more than 10 times. Smoking triples the risk of dying from heart disease among middle-aged men and women (CDC, 1993a). On average, smokers die nearly 7 years earlier than nonsmokers (CDC, 1993b).

Cigarette smokers have greater morbidity than nonsmokers. Current smokers have more acute and chronic illness, restricted activity days, bed disability days, and school and work absenteeism than former smokers or those who have never smoked (American Thoracic Society, 1996). Heavy Smoking increases coronary heart disease (CHD) risk by a factor of 3 to 10 (USDHHS, 1988; Willet, Green, & Stampfer, 1987). Cigarette smoking has clearly

been shown to be the major environmental risk factor predisposing to the development of chronic obstructive pulmonary disease (COPD); 15% of one-pack-per-day and 25% of two-pack-per-day cigarette smokers develop COPD (Wyser & Bolliger, 1997). COPD is also a known key factor that increases individual risk for lung cancer (Biesalski et al., 1998). There is conclusive evidence that smoking tobacco causes lung cancer. Smoking is the major risk factor, accounting for 90% of lung cancer incidence (Biesalski et al., 1998). Lung cancer is among the most commonly occurring malignancies in the world. The lung is the number one cancer mortality site overall and is one of the top four incidence sites for each racial and ethnic group in the US. Lung cancer has surpassed breast cancer as the leading cause of cancer death in women. In addition to lung cancer it is also well established that smoking is causally associated with cancers in other sites; these include the oral cavity, pharynx, larynx, esophagus, prostate, bladder, pancreas, and cervix (Jacobs et al., 1999; Shopland, Eyre, & Pechacek, 1991).

BENEFITS OF SMOKING CESSATION

After successful smoking cessation there is a significant reduction in mortality. The excess risk for total mortality, cardiovascular disease, and total cancer mortality among former smokers approaches the level of that for never smokers after 10 to 14 years of abstinence (Jacobs et al., 1999). The relative risk of mortality from cancer and other diseases decreases with each pack of cigarettes not smoked.

Smoking cessation has health benefits, mostly pulmonary and cardiovascular, before and after the age of 65 (LaCroix, Lang, & Scherr, 1991; Salive et al., 1992). The greatest benefits from smoking cessation do occur when people stop smoking before the age of 40. However, within all age groups, those who stop smoking show an increase in lung function compared with those who continue to smoke (Higgins et al., 1993). The health benefits of smoking cessation are impressive. Carbon dioxide levels can be decreased within 24 hours. Pulmonary cilia beating begins to improve within several days and sputum volume may decrease within several weeks of cessation (Pearce & Jones, 1984). There are clear health benefits from smoking ces-

sation regardless of the age of smoking initiation, the age of smoking cessation, and daily number of cigarettes smoked among current smokers (Kawachi et al., 1994).

DECREASED MEDICAL COSTS

The economic impact of smoking and tobacco is almost beyond measure. It is estimated that \$50 billion is spent annually for health care costs associated with tobacco use (CDC, 1994a). This figure is most likely conservative because the medical costs attributable to burn care from smoking-related fires, perinatal care for low birthweight infants of mothers who smoke, and treatment of disease caused by secondhand smoke exposure were not included in this calculation. The Office of Technology Assessment used these projections to further estimate what they believe are the smoking-related costs to the American society and they projected the costs to be at 68 billion dollars annually. With an estimated additional 21 billion dollars in costs for providing health care to persons with smoking-related illnesses and over 7 billion in costs for lost productivity by persons disabled with smoking-attributable diseases. Also, an additional 40 billion in indirect costs for forfeited earnings for those dying from premature deaths related to smoking-attributable diseases (Beheney & Hewitt, 1997). The CDC reported that smoking is responsible for approximately 7% of total US health care costs (CDC, 1994a). According to the Center for the Advancement of Health (1996) those who quit even after the age of 70 are estimated to avoid up to 50% of their direct medical costs.

THE ROLE OF ADVANCED PRACTICE PSYCHIATRIC NURSES IN TREATING TOBACCO USE

Tobacco dependence involves complex psychophysiological relationships and they are manifested in both dysfunctional behavior and physiologic changes. The ability of the advanced practice psychiatric mental health nurse to deliver broad based care while addressing psychotherapeutic needs positions APPNs in the forefront of treating tobacco use and dependence (Naegle, 1999). For most, tobacco use results in true drug dependence, comparable with the dependence caused by opiates, amphetamines, and cocaine. This dependence results in a chronic illness trajectory with a need for

repeated clinical interventions. APPNs deliver primary mental health care that includes the continuous and comprehensive services necessary for the treatment of addictive disorders and the promotion of optimal health (American Nurses Association [ANA], 1994). The advanced level functions included in the APPN role are critical to the treatment of tobacco use: psychotherapy, psychobiological interventions, clinical supervision/consultation, and consultation-liaison.

The current US Public Health Service (USPHS) guidelines urges clinicians to provide both counseling and pharmacotherapy for every patient willing to make a quit attempt (Fiore, Bailey, Cohen, et al., 2000). The APPN is proficient in both psychotherapy and the use of pharmacologic agents. The focus of these two advanced level functions are to integrate physiological and psychological dimensions of care and improve the client's psychological well-being and ability to function (ANA, 1994). This focus is a mandated strategy for treating tobacco use and preventing needless illness and death.

Clinicians report the lack of relevant knowledge as a significant barrier to intervening with their patients who use tobacco (Ferry, Grissino, & Runfola, 1999). In clinical supervision, the educative and consultative function of the advanced practice role, the APPN can bring to the practice of others the needed knowledge to treat tobacco use.

Smokers are in the hospital more often than nonsmokers and there is evidence that hospitalized smokers are receptive to smoking-cessation interventions (Dale, Olsen, Patten, Schroeder, Crogan, Hurt, Offord, & Wolter, 1997; Vernon, Crane, Prochaska, Fairclough, & Mackenzie, 1999). Cessation intervention may be particularly effective if initiated immediately on hospitalization by a psychiatric liaison nurse. The clinical aspect of the consultation liaison nursing role ranges from mental health promotion to illness rehabilitation (ANA, 1994).

The prevalence of smoking in psychiatric populations is higher than control populations, people with chronic schizophrenia having the highest smoking rates (George, Sernyak, Ziedonis, & Woods, 1995). APPNs may therefore be a first line of defense in this primary care issue. Factors that may explain higher rates of smoking in these populations include alleviation of depressive, psy-

chotic, and anxiety symptoms through the effects of nicotine on relevant neurotransmitter systems.

ASSESSMENT

The most important thing nurses can do to decrease morbidity and mortality attributable to smoking is to incorporate the assessment of tobacco use into everyday clinical practice (Sarna, 1999). Assessment is multifaceted and includes: smoking history, readiness to change, nicotine dependence, and motivators for and barriers for quitting.

Smoking History

All patients need to be asked about their current and past patterns of tobacco and nicotine use, including multiple sources of nicotine (tobacco products and over-the-counter nicotine replacements), the amount and type (Ziedonis, Wyatt, & George, 1998). Assessment of smoking history needs to include: smoking cessation history; the number and types and lengths of prior attempts, the reasons for quitting, any changes in functioning during abstinence, and cause of relapse.

Readiness to Change

The assessment of readiness to change and motivation to quit is essential. Smokers who are not considering quitting need different treatments than those who are ambivalent about stopping or who

are presently interested in stopping (Fiore, Bailey, & Cohen, 1996). About 40% of smokers are not considering stopping in the near future. They may be misinformed, demoralized about their ability to change, or defensive and resistant to change. Another 40% are ambivalent about quitting. These smokers have given it serious thought but are not yet ready to abstain. Approximately, 20% of smokers are intending to quit smoking in the next few months. Each type of smoker requires a different type of treatment (Fiore et al., 2000).

Nicotine Dependence

Quantifying a smokers degree of nicotine dependence is important because highly nicotine-dependent smokers require more intensive treatment. Within a few years of daily smoking, most smokers begin to develop dependence and note withdrawal symptoms on cessation (USDHHS, 1994). Nicotine dependence is associated with heavy consumption, tolerance, regulation of intake, and withdrawal. These factors are the basis for assessing for the appropriateness of nicotine replacement treatment. A useful tool for the assessment of nicotine dependence is the Fagerstrom Test for Nicotine Dependence (see Table 1).

Motivators for and Barriers to Quitting

Assessment of motivators and barriers are helpful in motivating patients. The most common rea-

Table 1. Items and Scoring for Fagerstrom Test for Nicotine Dependence

Questions	Answer	Points
1. How soon after you wake up do you smoke your first cigarette?	Within 5 minutes	3
	6-30 minutes	2
	31-60 minutes	1
	After 60 minutes	0
2. Do you find it difficult to refrain from smoking in places where it is forbidden, such as in church, at the library, in the cinema, and so on?	Yes	1
	No	0
3. Which cigarette would you hate most to give up?	The first one in the Morning	1
	All others	0
4. How many cigarettes per day do you smoke?	10 or fewer	0
	11-20	1
	21-30	2
	31 or more	3
5. Do you smoke more frequently during the first hours of waking than during the rest of the day?	Yes	1
	No	0
6. Do you smoke if you are so ill that you are in bed most of the day?	Yes	1
	No	1

Adapted with permission from Ziedonis, Wyatt, & George (1995). Scores range from 0 (no dependence) to 11 (high dependence). A score of 8 or more is considered to be an indication of high dependence and 4-7 moderate dependence.

sons for trying to stop are to improve health and in response to social pressure. The most common barriers are weight gain, fear of withdrawal, and fear of failure (Orleans, 1993).

Nicotine Withdrawal

About 50% of adults who attempt to stop smoking will meet DSM-IV criteria for nicotine withdrawal. The criteria include: Daily use of nicotine for at least several weeks; abrupt cessation or reduction of nicotine use followed within 24 hours by four (or more) significant signs and symptoms. The constellation of signs that indicate nicotine withdrawal include: depressed mood, insomnia, irritability, frustration or anger, anxiety, difficulty concentrating, restlessness, bradycardia, and increased appetite or weight gain. Smokers who have severe withdrawal with intense craving and depression symptoms are less likely to successfully stop smoking (Glassman, 1993).

Demographics, Psychosocial Factors, and Comorbid Conditions

Smoking is becoming the habit of the disadvantaged and the less affluent and the less educated (Pomerleau, 1997). Adults with 9 to 11 years of education had higher smoking prevalence (35.4%) than adults with 16 or more years of education (11.6%). It is higher among adults living below the poverty level (33.3%) than those living at or above the poverty level (24.6%). Smoking prevalence among the various racial and ethnic populations has remained stable in recent years; higher among American Indians/Alaska Natives (34.1%), Black Americans (26.7%) and Whites (25.3 %) than among Hispanics (20.4%) and Asian/Pacific Islanders (16.9%)(CDC, 1999a).

Social support is a major predictor of smoking cessation. The smoking status (e.g., never smoked, ex-smoker, current smoker) of others in the household and close friends should be assessed (Fiore et al., 1996) because of the importance of environmental cues and the health impact of second-hand smoke.

There are several comorbid conditions associated with smoking, which include substance abuse, affective disorders, and eating disorders. Among these comorbid conditions a history of depression has the strongest association. This linkage persists even after other comorbid conditions such as alcoholism and anxiety disorders are factored out

(Glassman, 1993). Glassman (1993) found that 60% of patients volunteering for a clinic smoking-cessation trial had a history of major depression (though they were not depressed at the time) and that patients with a history of depression failed at more than twice the rate of those without a history of depression.

INTERVENTION

Public Health Service-Sponsored Clinical Practice Guidelines

In 1996 the Agency for Health Care Policy and Research (AHCPR) produced the first set of guidelines for smoking cessation (Fiore et al., 1996). In June 2000 *Treating Tobacco Use and Dependence*, a Public Health Service-sponsored Clinical Practice Guideline was published (Fiore, et al., 2000). This guideline is the result of a partnership among Federal Government and nonprofit organizations comprised of the Agency for Healthcare Research and Quality (AHRQ, previously AHCPR), CDC, NCI, and others. This guideline was designed to assist clinicians; tobacco dependence treatment specialists; and health care administrators and insurers in providing effective treatments for tobacco use and dependence. The recommendations are based on a meta-analysis of the extant scientific literature. The major conclusions are: (1) tobacco dependence is a chronic condition that requires repeated intervention until long-term permanent abstinence is achieved; (2) effective tobacco dependence treatments are available and every patient who uses tobacco should be offered those treatments; (3) clinicians and all health care delivery systems need to institutionalize a consistent method to identify, document, and treat every tobacco user; (4) three types of counseling are found to be effective – practical counseling, social support as part of treatment, and social support arranged outside of treatment; (5) five first line pharmacotherapies have been proven to be effective and should be prescribed in the absence of contraindications –sustained release bupropion hydrochloride, nicotine gum, nicotine inhaler, nicotine nasal spray, and nicotine patch; and (6) tobacco dependence treatments are cost-effective relative to other medical and disease prevention interventions and should be a reimbursed benefit in all health insurance plans (Fiore, et al., 2000).

Table 2. Enhancing Motivation to Quit Tobacco Use—The 5 “Rs”

Relevance	Explore why quitting is personally relevant, being as specific as possible. Motivational information has the greatest impact if it is personally relevant.
Risks	Assist in the identification of potential negative consequences of tobacco use; suggest and highlight those that seem most relevant. Examples of risks are: Acute risks: shortness of breath, exacerbation of asthma, harm to pregnancy, impotence, infertility, increased serum carbon monoxide levels. Long-term risks: myocardial infarction and strokes, lung and other cancers, chronic obstructive pulmonary diseases, and long-term disability. Environmental risks: increased risk of lung and cardiac disease for family members, higher rates of smoking of children of tobacco users, increased risk for low birth weight, SIDS, asthma, middle ear disease, and respiratory infections in children of smokers.
Rewards	Assist in the identification of potential benefits of stopping tobacco use; suggest and highlight those that seem most relevant. Examples of rewards include: improved health; food will taste better; improved sense of smell; save money; feel better about yourself; home, car, clothing, and breath will smell better; can stop worrying about quitting; set a good example for children; have healthier babies and children; not worry about exposing others to smoke; feel better physically; perform better in physical activities; reduce wrinkling/aging of skin.
Roadblocks	Assist in the identification of barriers or impediments to quitting and note elements of treatment (problem solving, pharmacotherapy) that could address barriers. Typical barriers might include: withdrawal symptoms; fear of failure, weight gain, lack of support, depression, enjoyment of tobacco.
Repetition	The motivational intervention should be repeated at every treatment session. Tobacco users who have failed in previous quit attempts should be told that most people make repeated quit attempts before they are successful: “Never Quit Quitting.”

Reprinted from Fiore et al. (2000).

Interventions for Smokers Unwilling to Quit

Every person seen by a health care provider should have their tobacco use status assessed routinely. Psychiatric nurses should advise all tobacco users to quit and then assess a patient’s willingness to make a quit attempt. A brief intervention designed to promote the motivation to quit should be used for smokers not yet ready to make a quit attempt (Fiore, et al., 2000)

Patients not currently motivated to quit may lack information about the harmful effects of tobacco, may lack the financial resources needed for intervention, may have fears or concerns about quitting, or may be demoralized because of previous relapse. The Public Health Service (PHS) guideline recommends a motivational intervention called the “5 Rs”: relevance, risks, rewards, roadblocks, and repetition (Fiore et al., 2000) (Table 2). Motivational interventions are most likely to be successful when the clinician is empathic, promotes patient autonomy (e.g., choice among options), avoids arguments, and supports the patient’s self-efficacy

(e.g., by identifying previous successes in behavior change efforts (Fiore et al., 2000).

Interventions for Smokers Willing to Quit

As with chronic diseases, the most effective treatment of tobacco dependence requires the use of multiple modalities. Although there is great interest in the new pharmacotherapy options, treatment of smokers with severe nicotine dependence and comorbidity requires psychosocial treatments in addition to pharmacotherapy. Combining pharmacotherapies and psychosocial interventions is important and leads to improved outcomes (Sarna, 1999; Ziedonis et al., 1998).

The most widely used initial intervention and the one recommended by AHCPR was NCI’s 4As. The recently published PHS Clinical Practice Guidelines (Fiore, et al., 2000) proposes a 5As program consisting of five steps. These strategies are designed to be brief, requiring 3 minutes or less of direct clinician time (see Table 3).

The updated guideline urges clinicians to provide both counseling and pharmacotherapy for ev-

Table 3. The 5 As of Intervention

1. **Ask**—Systematically identify all tobacco users at every visit. Implement an office-wide system that ensures that, for every patient at every clinic visit, tobacco-use status is queried and documented.
2. **Advise**—Strongly urge all tobacco users to quit. In a clear, strong, and personalized manner, urge every tobacco user to quit.
3. **Assess**—Determine willingness to make a quit attempt. Ask every tobacco user if he/she is willing to make a quit attempt at this time (eg, within the next 30 days).
4. **Assist**—Aid the patient in quitting. Help the patient with a quit plan. Elicit a commitment to quit with a specific quit date. Provide practical counseling (problem solving/skills training). Stress the importance of social support. Provide supplementary materials.
5. **Arrange**—Schedule follow-up contact. Follow-up contact can be in person or by phone and should occur soon after the quit date, preferably during the first week. A second follow-up contact is recommended within the first month. If the patient is attempting smoking cessation a follow-up visit or call should be arranged for 1-3 days after the quit date.

ery patient making a quit attempt. The three recommended components of counseling (practical counseling, intratreatment social support and extratreatment social support) are described in Table 4.

Pharmacotherapies

In addition to counseling all smokers attempting cessation should receive pharmacotherapy. However, pharmacotherapy use needs to be closely evaluated in those with medical contraindications, those smoking fewer than 10 cigarettes per day, pregnant/breastfeeding women, and adolescent smokers (Fiore, 2000). The pharmacological approaches to smoking cessation that have been approved by the US Food and Drug Administration (FDA) and were identified by the PHS guideline panel (2000) as first-line medications include nicotine replacement therapies (i.e., patch, gum, spray, and inhaler) and bupropion sustained release (SR).

Nicotine Replacement Therapy (NRT)

NRT is based on the principle that nicotine is the dependence-producing constituent of cigarette smoking and that smoking cessation can be achieved by replacing nicotine without the toxins in cigarette smoke (Ziedonis et al., 1998). The goal is to relieve the symptoms of withdrawal, which

then allows the patient to focus on conditioning factors when attempting to stop smoking. After the acute phase NRT is gradually reduced. There are slow-acting (nicotine patch), intermediate-acting (nicotine gum and inhaler), and fast-acting (spray) delivery systems. However, all of these methods are much less efficient than cigarettes in delivering nicotine. Both the nicotine patch and gum are now available over the counter. These are the first-line medication choice of many smokers attempting to quit on their own. Given that NRT has been deemed safe and effective and that major side effects are very rare they should be recommended to all smokers except those who are pregnant. Although NRT has been proposed for use in pregnant women who are heavy smokers, formal clinical trials are needed to determine safety and efficacy (Benowitz, 1991; Kendrick & Merritt, 1996).

The nicotine transdermal patch provides ready absorption of nicotine through the skin but does not allow for self-titrated dosing for withdrawal symptoms. The patch is convenient and produces less fluctuation in plasma nicotine levels. The available brands begin at 15, 21, and 22 mg and lower doses of 7 and 14 mg are used for tapering the patch after 8 weeks of abstinence. There have been a substantial number of well-designed placebo-controlled clinical trials of the nicotine patch with excellent short-term (6 week) abstinence rates (40% vs. 20% for placebo) but more modest long-term (1 year) rates (19% vs. 10%) (Balfour & Fagerstrom, 1996; Ziedonis et al., 1998).

Nicotine polacrilex gum is available in doses of 2mg and 4mg; recommended dosing is in the range of 1 to 24 pieces per day, and heavy smokers (>20 cigarettes a day) require the 4-mg dose (Fiore et al., 2000). The gum is effective in reducing craving but is less effective in reducing nicotine withdrawal symptoms. Three recent control trials indicate using nicotine gum (2mg) ad-lib in addition to a nicotine patch increase quit rates over either therapy used alone without significantly increasing side-effects (American Psychiatric Association [APA], 1996).

Nicotine nasal spray is the most recent NRT modality to be approved by the FDA. The spray is a prescription drug and smokers are advised to use this spray as needed. A single dose for the spray delivers 0.5 mg to each nostril, and it can be used one to three times an hour. The suggested effective daily dose is 8 to 40 sprays (Fiore et al., 2000).

Table 4. Common Elements of the Three Recommended Components of Counseling

Element	Examples
Practical counseling (problem solving/skills training)	
treatment component	
Recognize danger situations	Negative affect
Identify events, internal states, or activities that increase the risk of smoking or relapse	Being around other smokers
	Drinking alcohol
	Experiencing urges
	Being under time pressure
Develop coping skills	Learning to anticipate and avoid temptation.
Identify and practice coping or problem solving skills to cope with danger situations.	Learning cognitive strategies that will reduce negative moods.
	Make lifestyle changes that reduce stress, improve quality of life, or produce pleasure.
	Learn strategies to cope with smoking urges (e.g., distracting attention)
	Any smoking, even a single puff increases greatly the likelihood of a full relapse.
	Withdrawal typically peaks in about 1-3 weeks after quitting.
	Withdrawal symptoms include negative mood, urges to smoke, and difficulty concentrating.
	Tobacco is addictive, tobacco use is an addiction.
Intratreatment supportive treatment component	
Encourage the patient in the quit attempt.	Note that effective tobacco treatments are now available.
	Note that half of all people who have ever smoked have now quit.
	Communicate belief in patient's ability to quit.
Communicate caring and concern.	Ask how patient feels about quitting.
	Directly express concern and willingness to help.
	Be open to the patient's expression of fears of quitting, difficulties experienced, and ambivalent feelings.
Encourage the patient to talk about the quitting process.	Ask about:
	Reasons the patient wants to quit.
	Concerns or worries about quitting.
	Success the patient has achieved.
	Difficulties encountered while quitting.
Extratreatment supportive intervention	
Train patient in support solicitation skills	Show videotapes that model support skills.
	Practice requesting social support from family, friends, and co-workers.
	Aid patient in establishing a smoke-free home.
Prompt support seeking	Help patient identify supportive others.
	Inform patients of community and online resources.
Clinician arranges outside support	Invite supportive others to cessation sessions.
	Encourage patient to "buddy-up" with other nonsmokers.

Reprinted from Fiore et al. (2000).

Onset of action of the spray is the most rapid of all NRTs because the drug is absorbed through the nasal mucosa into the arterial circulation and reaches the brain within 10 seconds (Balfour & Fagerstrom, 1996). The placebo-controlled studies to date support the efficacy of spray in long-term treatment of smoking cessation; quit rates with the spray are double those with placebo spray (Jones, Nguyen, & Man, 1998).

Nicotine vapor inhaler is not a true inhaler, however, it is used much like an inhaler for bronchial asthma. The nicotine inhaler mimics the upper airway stimulation derived by smokers; however, absorption is mostly buccal and not respiratory (APA, 1996). The amount of nicotine delivered is only 0.013mg, significantly less than the spray and produces lower plasma nicotine levels than other NRTs (Ziedonis et al., 1998).

Bupropion

Bupropion is the first FDA-approved non-nicotine replacement therapy for treating nicotine dependence. This is a heterocyclic, atypical antidepressant which blocks the reuptake of both dopamine and norepinephrine. Clinical trials have shown bupropion's efficacy in both depressed and nondepressed populations. In a study of 615 smokers bupropion significantly enhanced smoking cessation rates after 7 weeks of treatment. The effects were dose dependent and bupropion was most effective at 300mg per day with an abstinence rate of 44.2% (Hurt, 1997). Bupropion is contraindicated in those with a history of seizures or eating disorders. Dosage should include 150 mg every morning for 3 days then 150 mg twice daily and treatment should begin 1 to 2 weeks before the initial quit date. Treatment should be 8 to 12 weeks and maintenance a minimum of 6 months.

Hayford et al. (1999) found a significant dose-response effect of bupropion for smoking cessation that was independent of history of major depression or alcoholism. Furthermore, it has been found that abstinence rates are improved further with a combination treatment of bupropion and nicotine patch (Ziedonis et al., 1998).

Non-FDA Approved Medications

Several medications are currently undergoing clinical trials. Clonidine is an antihypertensive and sympatholytic agent that has been used extensively in the management of opiate and alcohol with-

drawal. Some studies suggest it is effective in reducing nicotine withdrawal and craving (Gourlay, 1994). Buspirone is a nonsedating, nonbenzodiazepine, anxiolytic agent indicated for the treatment of generalized anxiety. There is some limited evidence that buspirone can reduce nicotine withdrawal and craving (Cinciripini, 1995). Other than bupropion the most promising antidepressants for smoking cessation are nortriptyline (Hall, Reus, Munoz, Lees, & Humfleet, 1998) and doxepine (Edwards, Murphy, Downs, Ackerman, & Rosenthal, 1989). Moclobemide is a reversible inhibitor of monoamine oxidase that has been approved for treatment of major depression in Canada and Europe and has been shown to be effective in smoking cessation in highly dependent smokers (Ziedonis et al., 1998). The PHS guideline panel (Fiore, et al., 2000) listed clonidine and nortriptyline as second-line medications.

Relapse Prevention

Brief effective relapse prevention is necessary because of the chronic relapsing nature of tobacco dependence. When clinicians encounter a patient who has quit tobacco use recently, they should reinforce the decision to quit, review the benefits of cessation, and assist in resolving any residual problems arising from quitting. Although most relapse occurs within weeks of the quitting process, some relapse occurs months or even years after the initial quit date (Fiore, et al., 2000).

Relapse prevention interventions can be delivered by means of either scheduled clinic visits or telephone calls or any time a clinician encounters an ex-tobacco user. Relapse prevention interventions can be divided into two categories: minimal practice for all quitters and prescriptive interventions for patients with problems maintaining abstinence. In minimal practice, interventions should be part of every encounter with a patient who has recently quit. Every ex-tobacco user should receive congratulations on any success and strong encouragement to remain abstinent. Prescriptive relapse prevention components are individualized based on information obtained about problems the patient has encountered maintaining abstinence. These interventions need to be delivered during dedicated follow-up contact (in person or by telephone) or through a specialized clinic or program.

PSYCHIATRIC NURSES AND TOBACCO CONTROL POLICY

Organizations of nurses have joined tobacco opponents and have led the fight on public health issues. Many health care associations have developed position statements or endorsed position statements in relation to tobacco, smoking and health. These associations include the World Health Organization, the Oncology Nursing Society (ONS), the American Medical Association, the American Cancer Society, and the International Society of Nurses in Cancer Care (ISNCC). All organizations cite that tobacco use and/or exposure to second hand smoke increases the occurrence of cancer as well as other serious diseases leading to increased morbidity and mortality. All statements advocate control of tobacco use and endorse anti-smoking policies (ISNCC, 1999; Elders, Perry, Erikson & Giovino, 1994).

In 1997 the ONS developed a position paper on proposals for United States tobacco policies that was future-oriented, protective and reflects organizational consensus. Some of the proposed options have become policy and law while others have just begun to receive legislative consideration. In addition, ONS supports an increase in the federal and state excise tax on cigarettes of at least \$2.00 per pack to act as a deterrent and to provide funding that can be directed toward health services.

Advanced practice psychiatric nurses are at the forefront of the battle against tobacco use. Because of this position, psychiatric nurses need to actively support prevention and restriction efforts. There is a need to educate all psychiatric nurses about tobacco use and cessation and to incorporate into psychiatric nursing practice consistent smoking assessment and cessation promotion. However, there is also a need to call on members of psychiatric nursing's professional organizations to take an active role in initiating and supporting national and international tobacco control policy and legislation.

SUMMARY

Tobacco use is treatable and the benefits of smoking cessation are impressive, yet like other health care providers, psychiatric nurses have failed to consistently assess and treat tobacco use effectively. Tobacco use continues to cause illness, disability, and death at unprecedented rates. There are clear health benefits regardless of the age of

smoking initiation or the age of smoking cessation. The current USPHS Guidelines for treating tobacco urges clinicians to provide both counseling and pharmacotherapy for every patient that uses tobacco. The ability of the advanced practice psychiatric nurse to deliver psychotherapeutic and pharmacologic care positions APPNs in the forefront of treating tobacco use. In addition to intervention, psychiatric nurses need to step up and take an active role in initiating and supporting tobacco control policy and legislation.

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