

Targeting Nicotine Addiction in a Substance Abuse Program

The potential benefits of addressing nicotine addiction as part of substance dependency treatment may include improved response to interventions for other addictions and, over the long term, reduced tobacco-related morbidity and mortality. The authors recount the experiences of three inpatient programs that instituted nicotine addiction interventions and a tobacco-free policy for both facilities and patients. After making adjustments to counter temporary adverse effects of the policy, two of the programs are achieving higher overall treatment completion rates than prior to implementation. Outstanding research issues include quantifying the costs and benefits of the antinicotinic interventions, determining the long-term impact of tobacco-free treatment, and tailoring treatment to various patient groups.

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Providers of treatment for alcohol and other drug dependencies have been slow to address nicotine dependence (Abrams, 1995; Ellingsstad et al., 1999), even though an estimated 80 to 95 percent of people addicted to alcohol are smokers (Patten et al., 1996). Moreover, alcohol-dependent smokers are more likely to die from tobacco-related causes than from diseases associated with other drug or alcohol consumption (Hurt et al., 1993).

The conventional wisdom has been, “Let’s not make them quit everything at once” (notably, tobacco seems to be the only addictive substance given such an exemption). Treatment professionals have expressed concerns that the stress of quitting smoking might jeopardize patients’ recovery from other addictions (Bobo et al., 1995), and patients themselves often believe that smoking cessation will threaten their sobriety (Monti et al., 1995). There has been little research, however, to validate these fears, and at least one study found no adverse effects of concurrently treating alcoholism and nicotine dependence (Hurt et al., 1994). There is even some evidence that smoking cessation reduces the risk of alcohol relapse (Sobell et al., 1995). In other studies, smokers who abused opiates or cocaine were found to have a harder time with abstinence from illegal drugs than did non-smokers, and nicotine craving increased their cravings for other drugs (Frosch et al., 2000; Taylor et al., 2000).

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While research tends to allay fears that taking action against nicotine addiction will compromise other drug abuse treatments, programs have also been concerned that such interventions might have high economic costs. The potential considerations are:

- Loss of market share (if the number of referrals decreases or patients choose other programs where they would be allowed to continue smoking);
- Reductions in patient completion rates (if patients are discharged for violations of smoking rules or drop out of the program against clinical advice);
- Expenses for nicotine replacement medications and monitoring equipment; and
- Increased staff turnover (if smokers on staff prefer to leave the smoke-free environment).

This article recounts the experiences of three inpatient chemical dependency programs that recently began treating nicotine dependence along with the other addictions and that have converted to tobacco-free. Consistent with the approach to other drugs, the programs forbid patients and staff from having tobacco products on their premises and test patients to determine whether they have smoked while out on pass.

An inpatient treatment period is a particularly opportune time to address nicotine addiction because people addicted to alcohol and other drugs tend to be heavier smokers than people who do not have other drug dependencies (Monti et al., 1995). Inpatient treatment has been found superior to outpatient treatment for smokers who are moderately to severely nicotine dependent (Hays et al., 2001). Of course, following discharge, outpatient treatment of nicotine addiction is necessary for continuity of care.

GOING TOBACCO-FREE

The ATC Programs

New York State's Office of Alcoholism and Substance Abuse Services (OASAS) operates 13 Addiction Treatment Centers. All treat adults who are dependent on chemicals and meet the criteria for inpatient care (for example, they have failed to remain abstinent with outpatient treatment or they are homeless). As State-operated facilities, the ATCs are charged with providing inpatient treatment of addictions for all who need it, regardless of their ability to pay.

Among ATC patients statewide, 83 percent are unemployed, 50 percent are homeless, 40 percent are involved with the criminal justice system, 66 percent have a co-occurring mental health diagnosis, and

83 percent abuse more than one substance in addition to tobacco. The patient population is 79 percent male, the average age 37. The average length of stay in an ATC is 25 days, and nearly three-quarters of admitted patients, 73 percent, complete their course of treatment and move on to other levels of care in the community.

Three of the ATCs have established tobacco-free programs: Stutzman ATC in Buffalo, Norris ATC in Rochester, and Dick Van Dyke ATC in Ovid. The Norris and Van Dyke ATCs established their nicotine treatment programs October 1, 1996. Stutzman ATC followed in August 1998. Each of the programs entered its "contemplation stage" several years before taking action for real change. The preparation period began 1 year prior to implementation.

Getting Started

While the arguments in favor of integrating nicotine dependence treatment into the addictions treatment setting are both research-based and perfectly logical, staff, allied health and human service provider agencies, and patients may react in ways ranging from mild surprise to active resistance. It is therefore necessary to plan the change carefully and invest substantial preparation time with all stakeholders, to address and negotiate real and imagined concerns such as those mentioned above.

Throughout their preparation processes the ATCs followed guidelines provided by Slade and Hoffman (1992; see "Steps to Becoming a Tobacco-Free Treatment Facility"). Rustin (1998) reports that programs that did not follow such a process were unsuccessful in their efforts to become tobacco-free.

Two of the ATCs conducted a survey of staff attitudes toward nicotine dependence at the beginning of the transition process (see "Survey of Staff Knowledge and Beliefs Regarding Nicotine Dependency Treatment"). These ATCs had already been moving toward treating this addiction for years, and the survey results overwhelmingly favored this course. At the third ATC, Stutzman, the staff had reached consensus on the need to go tobacco-free some time previously, so the survey was deemed unnecessary.

Although the programs worked hard to prepare patients prior to the changeover date, problems began immediately. Instead of patients turning in all tobacco products and paraphernalia as agreed, contraband was widespread and the smell of smoke remained. Patients

Survey of Staff Knowledge and Beliefs Regarding Nicotine Dependency Treatment

1. Do you believe that nicotine is:

- An addictive drug that is more addictive than other drugs of dependence.
- An addictive drug that is just as addictive as other drugs of dependence.
- An addictive drug, but not as addictive as other drugs of dependence.
- A drug, but not addictive.
- Not a drug.

2. How important is the treatment of nicotine dependence in a patient's overall medical health?

- Extremely important.
- Very important.
- Somewhat important.
- Not at all important.

3. How will nicotine dependence treatment (tobacco abstinence) affect a patient's overall recovery?

- It is essential for healthy recovery.
- It will help the patient's recovery a lot.
- It may help the patient's overall recovery a little bit.
- It will not have any effect (neither help nor harm) on overall recovery.
- It will harm a patient's overall recovery.

4. Do you think that treating nicotine dependence along with other addictions is a good idea?

- Absolutely; a drug is a drug is a drug!
- Yes, but we need to allow patients to choose their own time-line for stopping their tobacco use.
- Maybe; we need to examine this matter on a case-by-case basis.
- No. Nicotine dependence has no relevance to other addictions.
- Definitely not! Addressing nicotine dependence while a patient is in treatment for other addictions is damaging to patient care.

5. What kind of support for staff will be needed to create a tobacco-free facility?

6. What training and/or information would you like to have regarding nicotine dependence? (Mark all that apply.)

- The basics: An understanding of the nature of nicotine dependence.
- Nicotine treatment and recovery, including withdrawal management.
- Medical aspects of tobacco use.
- How nicotine use relates to other chemical use.
- Psychosocial and cultural aspects of nicotine use.
- Marketing and advertising factors.
- Informal discussion exploring our beliefs regarding tobacco use.
- Other:

7. What is your personal relationship to nicotine?

- Never used.
- Tried, but never regular use.
- Former user.
- Current user.
- No comment.

8. Other comments?

Directors of the Norris and Van Dyke ATCs used this survey with their staffs to determine the likelihood of opposition to a tobacco-free policy, needs for education about nicotine addiction, needs for assistance with smoking cessation by clinic personnel, and expectations for training in treatment of nicotine dependence. The survey findings informed their plans for transition to a tobacco-free treatment program and facilities.

Steps to Becoming a Tobacco-Free Treatment Facility

1. Acknowledge the challenges tobacco creates for the addictions treatment community.
2. Establish a leadership committee of nicotine-free representatives of each staff level.
3. Develop a tobacco-free policy.
4. Establish a timeline for implementing the policy with measurable goals and objectives.
5. Provide training for the staff.
6. Provide assistance with recovery for nicotine-dependent staff members.
7. Assess and diagnose nicotine-dependent patients and use this information in treatment planning.
8. Incorporate nicotine dependence and cessation into the patient education curriculum.
9. Establish ongoing communication with 12-step recovery groups, professional colleagues, and referral sources about policy changes.
10. Require that no staff member be identifiable as a tobacco user.
11. Establish a tobacco-free facility and grounds.
12. Implement comprehensive treatment for nicotine dependence throughout the program.

Adapted from Slade, J., and Hoffman, A.L. (1992). Addressing Tobacco in the Treatment of Other Addictions: Steps for Becoming Tobacco-Free. Addressing Tobacco in the Treatment of Other Addictions Project: New Brunswick, NJ.

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displayed greater creativity in finding ways to hide contraband materials and smoke than staff did to catch them.

This poor initial response had roots in an administrative decision. Because the tobacco-free policy was new, the ATCs had decided to follow a “three-infraction rule.” The first violation of the tobacco-free policy resulted in a warning, the second in a case conference and a change in the patient’s treatment plan, and the third in the patient’s discharge. This practice proved disastrous. Patients took the three-infraction rule as license to use tobacco products until they were caught twice. Consequently, a large amount of contraband was maintained in the facilities, and numerous infractions consumed a great deal of staff time.

Two key changes set the programs on a better track. First, 18 months after the changeover, the first two facilities instituted “zero tolerance” for violations of the tobacco-free policy. Stutzman ATC instituted “zero tolerance” in only 6 weeks. This made program

practices consistent across all drugs and sent an unambiguous message to the patients. Second, each program procured a carbon monoxide (CO) monitor. With the monitor, staff members could make violators accountable without having to actually catch them smoking or find contraband on their person.

Current Practices

All prospective patients are asked to sign a “Tobacco-Free Contract” at admission. The contract reviews the rationale for treating nicotine dependence in conjunction with other addictions and outlines both surveillance measures (testing and searches) and the consequence for violation of the contract—discharge from the facility. A thorough chemical dependency history is taken at admission, and if nicotine dependence is diagnosed, the treatment team and the patient together generate a treatment plan.

Patients who meet the DSM-IV criteria for nicotine dependence—some 80 to 90 percent at admission—receive an offer of nicotine replacement therapy (NRT) with the transdermal patch. Counselors educate patients individually about NRT, which is particularly important because many patients are unaware of NRT or have formed negative impressions of it. For example, some patients have heard that the patch can cause a heart attack, which is incorrect. Others have heard that it causes nightmares and rashes, both of which do happen to some patients, but are generally minor inconveniences. Still other patients believe the patch will not relieve their nicotine cravings, or that they shouldn’t use a “crutch” to quit smoking. Some patients choose to quit “cold turkey.”

If a patient accepts NRT, the treatment team engages the patient in a discussion focusing on the appropriate dose and duration of patch use. The physician orders and the nursing staff administers a patch to the patient at the beginning of the medical interview, along with detailed instructions for using the patch and information about common side effects. Minor side effects can be treated with over-the-counter preparations and usually are not severe enough to warrant discontinuation of patch use. Fewer than 10 percent of the patients who have tried the nicotine patch at the ATCs have stopped using it because of side effects. Patients who cannot tolerate the patch’s side effects are offered nicotine gum. Some ATC patients receive Zyban (bupropion) as an alternative or in addition to NRT.

The initial dosage of the nicotine patch is matched to the number of cigarettes smoked per day. Heavy smokers (one and one-half to three packs per day) receive a high dose, up to two 21-mg patches per day, which has been shown to be safe and to more adequately relieve withdrawal symptoms in this specific group of smokers (Dale et al., 1995). Combination NRT, using the patch reinforced by nicotine gum as needed to treat excess cravings, has also been used successfully with virtually no increase in side effects (Kornitzer et al., 1995).

The programs have integrated nicotine addiction intervention into all their treatment activities, including individual and group therapy. Counselors are encouraged to substitute the phrase “tobacco, alcohol, and other drugs” for such terms as “chemicals” or “alcohol and drugs.” nicotine support groups are incorporated into the program schedule.

Generally, the counseling skills used to treat other drug dependencies apply directly to nicotine addiction. When we train the staffs of community addiction agencies, the counselors are relieved to learn that they already possess the skills needed to treat nicotine dependence. Moreover, counselors can use nicotine addiction as a very useful prototype for teaching about all addictions. For example, most of our patients do not experience strong cravings for drugs other than nicotine while in treatment, partly because of the absence of many triggers in the treatment setting. Cravings for nicotine, on the other hand, tend to be quite prevalent, especially in the first few days following cessation of the drug. These cravings provide a ready opportunity to teach patients coping strategies, which they can then use to avoid or resist cravings for any drug. In this and other ways, integrating treatment for nicotine dependence may enhance counselors’ overall effectiveness in treating chemical dependence.

Tobacco products, like alcohol and other drugs, are banned from the grounds of the ATCs. Tobacco paraphernalia, such as lighters or matches, are considered contraband and their possession is grounds for discharge. The staff is not permitted to show any evidence of tobacco use while at work. Visitors and family members are not permitted to use or possess tobacco products while on facility property.

The ATCs use a carbon monoxide monitor to test patients for tobacco use. These devices can detect elevated CO levels in the breath for up to several hours

after a person has smoked. Similar to the process for breathalyzer and urine toxicology testing, patients are tested on admission, on return from outside passes, and randomly while they are in residence. Use of tobacco products is treated as relapse and is handled like relapse to use of alcohol or other drugs, with discharge as a necessary measure.

The programs take administrative discharge very seriously and review their discharge policy and records frequently. The overriding priority has been to maintain the integrity of a tobacco-, alcohol-, and drug-free setting for treatment. Unfortunately, we have learned from experience that any leniency or ambiguity regarding the use of any substance, including tobacco, tends to result in a dramatic increase in the use of chemicals on the unit that typically entraps the most vulnerable patients into relapse. When a patient is discharged administratively, the program makes every effort to facilitate continued treatment with another provider.

Patients are tapered from NRT according to individual needs. Some request a weekly taper, while others are able to totally stop nicotine replacement after a few days in controlled tobacco-free settings with none of the usual smoking cues. Still others will request longer periods of treatment, or even an increased dose to respond to increased withdrawal symptoms or high-risk situations where they may be exposed to greater temptations or opportunities to smoke.

Once a patient has completed treatment, he or she is offered opportunities for continued NRT as needed. The continued use of NRT is individualized and not necessarily indicative of the patient’s treatment progress or lack of progress. Efforts are made to offer every patient continued counseling for nicotine addiction, and the ATCs’ outreach actions have resulted in such counseling becoming more available in the community. In New York State, Medicaid covers the cost of nicotine patches and nicotine gum if the patient has a prescription.

IMPACT ON PROGRAM COSTS

Market Share

The impact of going tobacco-free on market share was remarkably slight for all three ATCs. Annual referrals have remained the same or increased. Referral agencies have indicated that no more than 5 percent of their clients refused to consider admission to a facility where they could not smoke. An increasing minor-

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ity of admitted patients are saying that the tobacco-free policy was a plus in their decision to go to the ATCs.

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Program Census and Completion Rates

The ATCs' criteria for completion of treatment are abstinence from tobacco, alcohol, and other drugs; attainment of all or most inpatient treatment goals; and completion of a plan for continued care. In all three ATCs, the tobacco-free policy initially had a dramatic negative impact on the portion of patients achieving these objectives, but the dip proved to be brief. One program's monthly completion rate plummeted from 75 percent to below 50 percent, but recovered to 70 percent within 4 months. The resulting effect on the average census was ameliorated somewhat by increasing the number of admissions to fill the beds vacated by patients who either left against clinical advice or were discharged for using tobacco products while in treatment.

Rates of completion and average daily census have returned to the levels reported prior to going tobacco-free and now remain at those levels or higher. The Stutzman ATC discharged 2 percent of its patients for smoking violations before it went tobacco-free, and it is currently discharging patients at the same rate. The Van Dyke ATC had a completion rate of 70 percent prior to going tobacco-free, and its current completion rate is over 80 percent. This improvement is most likely due to the ATCs' overall continuous performance improvement efforts. The Norris ATC's completion rate is about 65 percent, slightly lower than the rate prior to institution of the tobacco-free policy.

Expenditures

NRT can be expensive for providers. The annual expenditure for nicotine patches for the three ATCs, which have a combined total of 107 beds, is \$82,000. This translates to approximately \$766 per bed or \$51 per admission. In addition, CO monitors cost nearly \$1,000 apiece, and a supply of disposable mouthpieces must be maintained.

Prior to going tobacco-free, however, the ATCs were spending nearly half as much on NRT for patients who were attempting to stop smoking. Those efforts often failed because of social pressures from smoking patients. The additional costs for implementing the full tobacco-free program amount to less than 2 per-

cent of the ATCs' budget, and would be far less in agencies that receive reimbursement from Medicaid and other third-party payers. With a success rate greater than 95 percent for getting patients to quit smoking during addiction treatment, the expenditure seems well worth the outcome in projected reduced health care costs and patient mortality. Furthermore, being tobacco-free reduces fire hazards and decreases expenditures for cleaning and painting.

Staff Turnover

All three ATCs were fortunate to have few smokers on staff when the project started. Consequently, the conversion to being tobacco-free did not cause any staff turnover. Those few smokers on staff prior to the changeover decided to quit smoking. For facilities with a greater number of active smokers among the staff, the preparation phase might have to be drawn out and more supports provided to assist employees in becoming tobacco-free.

CLINICAL RECOMMENDATIONS

Attention to treating nicotine dependence is finally coming to the fore in the treatment community. Our experiences at the OASAS ATCs demonstrate that transition to tobacco-free chemical dependency treatment is manageable. Addiction professionals already have the expertise to treat many forms of psychoactive dependence and this is easily transferable to the treatment of nicotine dependence. We recommend the following steps:

- **Read the research literature on nicotine.** Copious research findings on addressing nicotine dependence in the last 10 years can reduce many of the fears expressed by program managers and professionals. Among the pioneers in the field are Richard Hurt, M.D., and Terry Rustin, M.D. Dr. Hurt has integrated nicotine treatment into inpatient addiction treatment at the Mayo Clinic. Dr. Rustin has assisted several addiction programs to become tobacco-free. He is the author of *Quit and Stay Quit: A Personal Program to Stop Smoking*, and his Web site (www.quitandstayquit.com) includes many resources for addiction programs.
- **Follow a planned process.** Too often programs have rushed into becoming tobacco-free only to subsequently retreat in the face of stubborn opposition from staff, patients, or the community. Detailed guides include Slade and Hoffman (1992) and *Drug-*

Free Is Nicotine-Free: A Manual for Chemical Dependency Treatment Programs (Hoffman et al., 1997). It is especially important that treatment providers not institute a policy forbidding tobacco use without providing support for patients' and staff members' cessation efforts.

RESEARCH RECOMMENDATIONS

- **Develop “best practice” benchmarks for reducing costs and quantifying the benefits of transition.** The more the real transition costs can be reduced, the more likely programs will become tobacco-free. How can we determine the effective dosage of NRT for individual clients? How can we measure the short- and long-term effects of tobacco cessation on reduction of health care costs and on mortality rates?
- **Determine the long-term impact of tobacco-free treatment on the recovery and general health of patients.** Followup surveys from one of the ATCs documented that as many as 12 percent of former smokers stayed tobacco-free for the first 3 months after discharge. Are these cessation rates sustained over time? Can they be improved with continued treatment for tobacco dependence in outpatient settings?
- **Tailor treatment to subtypes of patients.** Does tobacco-free chemical dependency treatment need to be adjusted for various groups of patients—for example, women, who typically are less successful than men with NRT, or patients with co-occurring psychiatric disorders?

CONCLUSION

The chemical dependency field has been slow to integrate treatment for nicotine dependence for fear that such an intervention might undermine recovery from addiction to alcohol and other drugs. There is growing evidence that including nicotine treatment in chemical dependency programs may enhance treatment outcomes; many other studies have failed to document any negative effects. The experience of three inpatient treatment programs that converted to being tobacco-free indicates only temporary adverse effects while providing an additional, potentially long-term treatment benefit for patients. Research is needed to find ways of reducing the costs and quantifying the benefits of becoming tobacco-free.

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REFERENCES

- Abrams, D.B., 1995. Integrating basic, clinical and public health research for alcohol-tobacco interactions. In J.B. Fertig and J.P. Allen (eds.), *Alcohol and Tobacco: From Basic Science to Clinical Practice*. NIAAA Monograph No. 30 (NIH Publication No. 95-3931, pp. 3-16). Bethesda, MD: U. S. Department of Health and Human Services, Public Health Service.
- Bobo, J.K.; Slade, J.; and Hoffman, A.L., 1995. Nicotine addiction counseling for chemically dependent patients. *Psychiatric Services* 46(9):945-947.
- Dale, L.C., et al., 1995. High-dose nicotine patch therapy: Percentage of replacement and smoking cessation. *Journal of the American Medical Association* 274(17):1353-1358.
- Ellingstad, T.P., et al., 1999. Alcohol abusers who want to quit smoking: Implications for clinical treatment. *Drug and Alcohol Dependence* 54(3):259-265.
- Frosch, D.L., et al., 2000. Associations between tobacco smoking and illicit drug use among methadone-maintained opiate-dependent individuals. *Experimental and Clinical Psychopharmacology* 8(1):97-103.
- Hays, J.T., et al., 2001. Residential (inpatient) treatment compared with outpatient treatment for nicotine dependence. *Mayo Clinic Proceedings* 76(2):124-133.
- Hoffman, A.L., et al., 1997. *Drug-Free Is Nicotine-Free: A Manual for Chemical Dependency Treatment Programs*. New Brunswick, NJ: Tobacco Dependence Program.
- Hurt, R.D.; Eberman, K.M.; and Croghan, I.T., 1994. Nicotine dependence treatment during inpatient treatment for other addictions: A prospective intervention trial. *Alcohol: Clinical and Experimental Research* 18(4): 867-872.
- Hurt, R.D., et al., 1993. Treating nicotine addiction in patients with other addictive diseases. In C.T. Orleans and J. Slade (eds.), *Nicotine Addiction: Principles and Management*. New York: Oxford University Press.
- Kornitzer, M., et al., 1995. Combined use of nicotine patch and gum in smoking cessation: A placebo-controlled clinical trial. *Prevention Medicine* 24(1):41-47.
- Monti, P.M., et al., 1995. Smoking among alcoholics during and after treatment: Implications for models, treatment strategies, and policy. In J.B. Fertig and J.P. Allen (eds.), *Alcohol and Tobacco: From Basic Science to Clinical Practice*. NIAAA Monograph No. 30 (NIH Publication No. 95-3931, pp. 187-206). Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service.