ASAM American Society of Addiction Medicine

Integrating Tobacco Use Disorder Interventions in Addiction Treatment

A guide for addiction treatment clinicians and programs.

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Summary of Recommendations

1. Screen all patients for tobacco use disorder
2. Offer evidence-based treatment to all patients with tobacco use disorder
3. Use motivational and harm reduction strategies for patients ambivalent about quitting
4. Implement organizational policies to support treatment of tobacco use disorder

Background

Between 65-87% of patients in addiction treatment smoke tobacco, compared to about 21% of the general population.[3] These high rates of tobacco use contribute to significant patient suffering and early death.[4] Over 53% of people with substance use disorder (SUD) die of tobacco-related causes. Most of these deaths occur before age 60, while only about 30% of the general population die of tobacco-related deaths and typically after age 70.[5] Highly effective interventions that target tobacco use are available; however, they are ***not*** sufficiently integrated into addiction treatment programs.[6]

Over 53% of people with substance use disorder (SUD) die of tobacco-related causes.

Common misconceptions have limited the use of tobacco use disorder interventions in addiction treatment settings.[7-9] Many clinicians mistakenly believe that encouraging patients to address their tobacco use disorder may disrupt the treatment for other SUDs.[7] However, research has clearly demonstrated the efficacy of treating tobacco use disorder in parallel with other SUDs.[8,10-12]

Providing evidence-based treatment for tobacco use disorder during addiction treatment is associated with a 25% increased likelihood of long-term abstinence from alcohol and illicit drugs.[8] Yet, in a recent national-level survey study, only 64% of the patients in substance use disorder (SUD) treatment were screened for tobacco use, and less than one in four facilities offered evidence-based pharmacotherapies to help them quit tobacco.[13]

Continued tobacco use corresponds to poorer addiction treatment outcomes, including a higher likelihood of relapse to substance use.[14] The integration of tobacco-related services into addiction treatment can improve treatment outcomes, promote recovery, and reduce the well-established harms of ongoing tobacco use, including tobacco-related death and disease.[15]

Patients in addiction treatment are 3-4 X more likely to smoke than the general population.

Recommendations

Screen all patients for tobacco use.

Patients entering addiction treatment should be screened for nicotine and tobacco use. For patients who screen positive, nicotine and tobacco use history should be assessed, accounting for all types of nicotine and tobacco product use, as defined in Table 1. In addition, the duration and frequency of use, prior quit attempts, and motivation to quit/stage of change should be reviewed.

Validated tools for determining physical nicotine dependence include the Fagerstrom Test of Nicotine Dependence, the Minnesota Withdrawal Scale, or the Nicotine Withdrawal Symptom Scale. Biochemical testing for combustible tobacco products includes carbon monoxide breath testing.[1]

Offer evidence-based tobacco cessation treatment to all patients with tobacco use disorder.

Address tobacco-related problems and goals in treatment planning.

Treatment providers and programs should address tobacco use in treatment planning as they would treatment of any other substance.

Treatment providers and programs should address tobacco use in treatment planning as they would treatment of any other substance. Part of engaging patients with a tobacco use disorder should include providing brief, friendly, and unambiguous advice to stop tobacco use completely. Patients should be educated that tobacco use disorder is treatable, and those that are interested in quitting should be assisted with developing a treatment and relapse prevention plan, including setting a target quit date if the patient is ready.

Provide barrier-free access to evidence-based tobacco cessation interventions.

Advising patients to stop tobacco use without providing evidence-based interventions is not sufficient. For all people who use tobacco products and are willing to engage in treatment, we recommend pharmacologic therapy (i.e., nicotine replacement therapy/NRT, varenicline, and bupropion) and behavioral interventions (e.g., cognitive behavioral therapy, contingency management).[16,17] These evidence-based tobacco use disorder interventions are applicable to all types of tobacco product use, as represented in Table 1.[10,11,17]

Telehealth visits should be considered for patients who find it difficult to attend face-to-face meetings and who would be more likely to engage through virtual interactions.18 Providers should also consider providing guidance regarding stress management, nutrition, and recovery supports available in the community.

Pharmacological treatments are recommended as front-line treatments for tobacco use disorder (see Table 2). All licensed forms of nicotine replacement therapy (NRT; gum, transdermal patch, nasal spray, inhalator, and sublingual tablets/lozenges) increase the rate of quitting smoking by 50% to 60%, regardless of setting.[19] Rates of cessation for varenicline (Chantix) are similar.[20] Tobacco cessation pharmacotherapies can be combined to increase their effectiveness.[20-22] For example, patients may benefit from NRT in combination with varenicline or bupropion.[23]

In addition, patients may benefit from a combination of different types of NRT.24 A recent Cochrane Review found that there is high-certainty evidence that using combination NRT, a long acting-form (patch) plus a short-acting form (i.e., nicotine gum) is more effective than a single-form of NRT.[22] At a minimum, all programs should be able to recommend the gum, patch, and lozenge because these medications can be purchased over-the-counter. Programs that are unable to offer tobacco use disorder treatment should assist patients with accessing appropriate care.

Correct misconceptions about tobacco use disorder and addiction treatment.

Patients might be concerned that quitting tobacco could disrupt their efforts to stop other substance use. These beliefs are not supported by evidence, which demonstrates that tobacco cessation can help, not hinder, addiction treatment interventions.[8,9,17] Clinicians should educate patients on the effectiveness of concurrent treatment for tobacco use disorder and other SUDs.

Tobacco cessation can help, not hinder, addiction treatment interventions.

A common misconception among the general public, as well healthcare providers, is that nicotine directly contributes to cancer and cardiovascular disease.[25] While nicotine is the addictive component of tobacco, it is the carcinogens and carbon monoxide produced in the combustion of tobacco that overwhelmingly cause tobacco-related disease and death.[26] Misconceptions about nicotine's harms contribute to under-use of NRT. Providing clients with educational materials on tobacco and secondhand smoke and ways to stop using tobacco can help to correct these misconceptions. The National Cancer Institute has developed a helpful resource on myths about nicotine replacement therapy that is a helpful guide for patients and staff (https://smokefree.gov/sites/default/files/pdf/mythsaboutNRTfactsheet.pdf).

Emerging strategies.

Testing for nicotine metabolites, specifically the ratio of 3'hydroxycotinine/cotinine metabolite, can be used to measure rate of nicotine metabolism which can inform treatment planning. For example, normal nicotine metabolizers have a greater chance of quitting with varenicline compared with the nicotine patch. The current use of this strategy is limited by the cost of the assays and the feasibility of sample collection.[1,2]

Assess tobacco-related comorbid health conditions.

Tobacco use is associated with a range of chronic health conditions, including cancer, chronic obstructive pulmonary disease (COPD), heart disease, and diabetes.[26] Consistent with the ASAM Criteria, patients should have a complete biopsychosocial assessment, and treatment for acute and chronic biomedical and psychiatric conditions should be integrated into addiction treatment. All patients presenting for addiction treatment who have ongoing tobacco use should be educated on the harms of such use, and appropriate medical follow-up should be coordinated. Intensive treatment services may be indicated to support tobacco cessation treatment in patients who have difficulty quitting despite being at risk for severe, life-threatening consequences of tobacco use.

Considerations for special populations.

Interventions for tobacco use disorder can improve the health and well-being of all patients, including special populations such as adolescents, pregnant women, and patients with obesity.

- **Adolescents.** All adolescents should be screened for tobacco use routinely. The interventions that are most effective in adolescents include individual counseling, motivational enhancement, and cognitive-behavioral therapy (CBT).[27] Young tobacco users might benefit from online cessation support resources provided by the National Institutes of Health (https://teen.smokefree.gov/). Given the effectiveness of pharmacotherapy for adults and the severe harms of tobacco use disorder, the American Academy of Pediatrics recommends that providers consider off-label pharmacotherapy for youth who are moderately or severely addicted.[28] Similar to adults, if youth are not ready to quit, providers should discuss strategies for reducing tobacco use and related harms and incorporate motivational enhancement strategies into the patient's treatment plan.[29] Lastly, strategies targeting young people who use tobacco should consider both individual and environmental factors, including tobacco use among peer groups and family members.[30]

- **Pregnant Patients.** Smoking during pregnancy is a major risk factor for preterm birth and low birth weight, increasing the risk for serious health problems and infant death. As recommended by the American College of Obstetricians and Gynecologists, pregnant women who use tobacco products should be offered individualized care that may include psychosocial, behavioral, and pharmacotherapy interventions.[31] Use of nicotine replacement therapy should be considered only after a detailed discussion with the patient of the known risks of continued tobacco use, the possible risks of nicotine replacement therapy, and the need for close monitoring. If nicotine replacement therapy is used, it should be with the clear goal of quitting smoking.
- **Patients with Overweight or Obesity.** Approximately two-thirds of people seeking treatment for tobacco use disorder are overweight or obese, and those who quit smoking gain an average of 9 lbs over five years, compared with 3.3 lbs for those who do not quit. Patients with overweight or obesity prior to quitting tobacco use are at the greatest risk for weight gain. Patients with overweight or obesity are likely to benefit from personalized weight-management programs and the use of medications such as bupropion to help prevent weight gain during cessation attempts.[32]

Track patient progress and modify treatment plans accordingly.

Patients who have stopped tobacco use should be monitored for relapse. Carbon dioxide testing, using a portable breathalyzer, can be used to confirm abstinence from smoked tobacco. Relapse to smoking after a quit attempt is most likely in the first few weeks after stopping, and decreases rapidly over time.[33] When a patient returns to tobacco use, their treatment plan should be updated. More intensive treatment may be indicated, including the addition of combination pharmacotherapy, intensification of treatment (e.g., increasing the dose of nicotine replacement therapy), and/or psychosocial interventions to address relapse triggers.

Use motivational and harm-reduction strategies for patients ambivalent about quitting.

Motivational interviewing should be used to support patients that are ambivalent about stopping nicotine or tobacco use.

The tailoring of interventions to the patient's stage of change is essential for supporting patients in reducing or stopping their use of tobacco products. Motivational interviewing can increase readiness for those not yet ready to quit.[34]

Offering pharmacotherapy to patients considering quitting or reducing smoking can increase self-efficacy and empower patients to quit.

Some patients may be interested in reducing their tobacco use rather than quitting tobacco use.[35] Individuals considering quitting or reducing smoking should be offered the option of initiating pharmacotherapy rather than waiting until they are ready to stop tobacco use completely.[23,35-37] This strategy can help patients decrease tobacco use, increase self-efficacy, and become familiar with available tools to enable future quit attempts.

Utilize harm reduction principles to reduce harms associated with tobacco use.

Harm reduction principles can be utilized to educate ambivalent patients on the relative harm of different tobacco products. These strategies seek to motivate patients to stop or reduce their use of combustible tobacco products, the most harmful form of nicotine delivery. Non-combustible forms of nicotine, including NRT, snus, and ENDS, while not completely safe, expose the patient to far less harmful constituents and do not deliver carbon monoxide.[38] Patients who continue to use tobacco should be empowered and encouraged to minimize the use of combustible tobacco products, which are most harmful to their health[39], as shown in Figure 1.

There is ongoing controversy over the potential effectiveness of ENDS for aiding smoking cessation. Some ENDS products may help to reduce the use of combustible cigarettes and their associated harms.[40-42] However, these products have not been approved as safe and effective medical interventions for tobacco use disorder in the United States.

Patients who use vaping devices, particularly those who vape marijuana, should be informed of the risks for lung injury. In 2019 there was a sharp increase in patients hospitalized because of lung injury related to vaping. The CDC recommends "that people not use THC-containing e-cigarette, or vaping, products, particularly from informal sources like friends, family, or in-person or online dealers."

If smokers want to try ENDS, they should be encouraged to switch completely as the dual use of ENDS and combustible cigarettes may undermine efforts at cessation.[39] For patients that exclusively use ENDS, motivational interviewing should still be used to promote cessation and to prevent the patient from relapsing to combustible cigarettes.

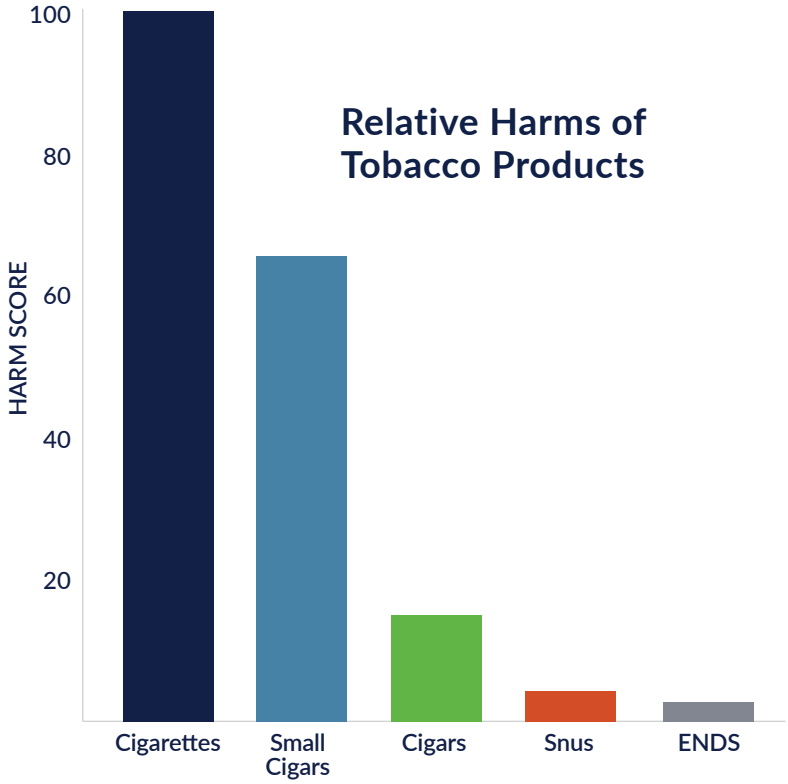

Figure 1. Figure based on Nutt et al., 2014, Figure 3. The data represented in the figure are overall harm scores reflective of mortality, morbidity, dependence, loss of tangibles and relationships, injury, crime, environmental damage, family adversities, international damage, economic cost, and community cohesion/reputation.[52]

Implement organizational policies to support tobacco cessation.

Implement tobacco-free policies in addiction treatment settings.

Facilities and grounds of addiction treatment need to be made tobacco-free for all patients, staff, and visitors. Tobacco-free grounds can promote quitting and increase the use of pharmacotherapy among patients.[43] Multiple states and the Veterans Healthcare Administration now require tobacco-free grounds for most substance use facilities.[44,45] In addition, the state of California passed a bill in 2021 that requires that certified addiction treatment programs assess all patients for the use of tobacco products at the time of intake, educate them about how continued use could affect their recovery, and offer treatment or referral for treatment to quit smoking.[46] Other states are encouraged to consider implementing similar regulations.

Incentives can also be used to encourage programs to become tobacco-free. For example, accrediting bodies could incorporate standards for tobacco-free facilities in accreditation and certification programs.

Educate and train staff to support tobacco-free policies.

The implementation of tobacco-free policies can be challenging.[45,47,48] Staff and patient tobacco use are related and sometimes include shared smoke breaks.[49,50] In addition, addiction treatment staff might have misconceptions about the benefits of smoke-free settings and tobacco use disorder interventions.[6] Educating employees at all levels within the facility on the need for a tobacco-free treatment environment is critical for supporting such policies.

A recent systematic review found that addiction treatment providers often felt they lacked training and resources for

supporting smoking cessation.[7] Training designed to support tobacco-free work environments, to address misconceptions around nicotine and tobacco use, and to support the consistent delivery of tobacco use disorder interventions can be integrated into staff orientation and ongoing education requirements.

Organizational Change Strategies.

Addiction treatment providers and programs, as well as policymakers, can take key steps to support tobacco use disorder care in addiction treatment settings, as outlined in the table below.[47] A variety of organizational change strategies have been designed for implementing tobacco-free policies, as described in a recent systematic review.[47]

1. Identify staff who will provide tobacco use disorder care

- Include tobacco use disorder interventions among the defined duties of staff members

2. Educate and train staff on:

- How to screen for tobacco use
- How they can support the treatment of tobacco use disorder under their scope of practice
- The efficacy of providing tobacco use disorder interventions during addiction treatment
- The importance of aligning organizational policies to support quitting tobacco use
- The role of all staff in creating an environment supportive of quitting tobacco use

3. Integrate tobacco use disorder treatment throughout the workflow, including:

- Screening all patients for tobacco use
- Educating patients who use tobacco on treatment options
- Providing barrier-free access to evidence-based tobacco use disorder treatment
- Update marketing and other patient-facing materials to incorporate positive messaging about the benefits of tobacco cessation during addiction treatment.

4. Implement facilty-wide "tobacco-free" policies

- Ensure staff have access to evidence-based tobacco use disorder treatment services
- Organizations should consider how employee assistance programs can support staff with tobacco use disorder

5. Evaluate progress, including:

- The percentage of patients who are screened for tobacco use
- The percentage of patients with tobacco use disorder who are offered treatment
- The percentage of patients who initiate tobacco use disorder treatment
- Changes in patient tobacco use

6. Hold staff accountable

- Assess delivery of tobacco use disorder care, and support of "tobacco-free" policies in staff performance evaluations

7. Identify reimbursement strategies for tobacco use disorder care, including both pharmacotherapy and psychosocial interventions

Recommendation for Policy Makers.

Policy makers also have a key role in supporting addiction treatment programs to implement tobacco-free policies that prohibit the use of all forms of tobacco, as described in Table 1. Some treatment programs may hesitate to implement tobacco-free policies because of the potential business impact. Requiring all addiction treatment programs in a state to be tobacco-free can ensure that treatment programs that seek to address tobacco use disorder do not have a competitive disadvantage. As some patients may cross state lines for treatment, policy makers should consider coordinating policies with nearby states.

The cost of implementing tobacco use disorder interventions should also be considered by policy makers. Tobacco use disorder screening and treatment services should be reimbursed by both public and private payers at all levels of care and intensities of treatment.

It is essential that all addiction treatment program patients and staff have access to evidence-based tobacco use disorder treatment. Policy makers should consider strategies for providing access to treatment at no cost.

Table 1: Nicotine and Tobacco Product Descriptions

Name	Description
Tobacco Product*	Any product containing, made from, or derived from tobacco or nicotine that is intended for human consumption, whether smoked, heated, chewed, absorbed, dissolved, inhaled, snorted, or sniffed.
Combustible Tobacco	Traditional cigarettes, cigars, pipes, roll-your-own cigarettes, hookah
Heated Tobacco	Heat-not-burn tobacco
Smokeless Oral Tobacco	Snus, snuff, pouches, loose-leaf, dissolvable products
Electronic Nicotine Delivery Systems (ENDS)	Vaping or e-cigarettes

Product descriptions are based on definitions provided by the U.S. Food and Drug Administration, the Tobacco Dependence Treatment Toolkit from the Chest Foundation, and the U.S. Preventive Services Task Force.

*Tobacco products do not include products approved by the U.S. Food and Drug Administration for sale as a tobacco cessation product or for other therapeutic purposes where the product is marketed and sold solely for such an approved purpose (e.g., nicotine replacement therapy such as gum, patch, or lozenge).

Table 2: FDA-Approved Tobacco Cessation Interventions

	Nicotine Replacement Therapies (NRT)					Other Therapies	
Medication	**Transdermal Nicotine Patch[2]**	**Nicotine Polacrilex gum[2]**	**Nicotine Lozenge[2]**	**Nicotine Nasal Spray**	**Nicotine Inhaler**	**Bupropion (SR or XL) (Zyban, Wellbutrin)**	**Varenicline (Chantix, Champix)**
Suggested Regimen[1]	Transdermal Nicotine Patch <= 10 cig/d, start with 14mg/d x 6 wks or longer; can consider increasing dose up to 21mg/d >10 cig/d, start with 21mg/d x 6 wks or longer If needed	1st cig >30 mins after awakening, 2 mg/hr 1st cig =<30 mins after awakening, 4 mg/hr If needed for smokers <= 10 cig/d, feel comfortable prescribing 4mg gum[4]	1st cig >30 mins after awakening, 2 mg/hr 1st cig =<30 mins after awakening, 4 mg/hr If needed for smokers <= 10 cig/d, feel comfortable prescribing 4mg lozenges[4]	1-2 sprays per nostril/hr, PRN. Increase to 5 sprays per nostril per hr (max 80 sprays total) x 3 mos maximum[3]	4 puffs/min x 20-30 mins per cartridge = 1½-2 cigarettes PRN	Days 1-3: 150mg po qam Day 4 to 12 weeks (or end of treatment[5]): 150mg SR bid or 300mg XL po qam	Start >= 1 week before target quit date 0.5mg po qam x 3days then 0.5mg po bid x 4days then 1 mg po bid x 11 weeks to 6 months. Target quit date can be delayed or extended if needed.

[1] Suggested regimens are based on the CHEST Foundation Tobacco Dependence Treatment Toolkit and are meant to provide general guidelines that can be individualized to each patient as needed (e.g., side effects, comorbid health conditions). Tobacco cessation treatments should have an extended duration (i.e., > 12 weeks), especially when individuals have a high level of nicotine dependence and/or serious tobacco-related health comorbidities. Adverse events associated with the approved treatments for smoking cessation are not considered clinically important and are well tolerated.[51]

[2] The patch, gum, and lozenge are available over-the counter and can be used in combination including more than one transdermal patch.

[3] This prescription cannot exceed 3 months. The patient should be tapered off or switched to an alternative NRT within 3 months.

[4] If the patient experiences throat pain, consider reducing the dose.

[5] Target quit date can be delayed as needed.

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