SMIAdviser
A Clinical Support System for Serious Mental Illness

An APA and SAMHSA Initiative

AMERICAN PSYCHIATRIC ASSOCIATION

SAMHSA Substance Abuse and Mental Health Services Administration

THE BASICS ON SUBSTANCE USE AND SERIOUS MENTAL ILLNESS

TOBACCO and NICOTINE PRODUCTS

PART 1: BASIC FACTS

Description: This category includes all forms of tobacco (smoking, chewing), as well as nicotine products used for vaping.

Prevalence: Tobacco smoking rates among individuals with SMI exceed rates among the general population and contribute to the high rates of medical comorbidity and mortality in this population.[1,2] Nearly 40% of all the cigarettes smoked in the US are smoked by people with mental illnesses and/or substance use disorders (SUDs).[3]

Reasons for use: Nicotine is associated with relief of anxiety, as well as having mild psychostimulant properties. Many individuals report enhanced cognition (combatting sedation and/or negative symptoms) and alertness. Additionally, smoking has been associated with a decrease in negative symptoms.[4] The ritual of smoking itself can become an important way of structuring time as well as a means of social networking and engagement.

Finally, because nicotine is addictive, particularly when inhaled, individuals who begin to smoke as a way of coping with mental illness will become addicted, leading to persistence of use even in the face of harmful consequences to health, wellbeing, and budget. Further, nicotine exposure among youth has led to promotion of central addictive pathways thus leading to greater likelihood of SUD.[5] Not surprisingly, therefore, nicotine use is even more common among individuals with SMI and co-occurring SUD.

Problems related to use in people with SMI:

- **Effect on the brain and health:** Nicotine is a mild psychostimulant and for many people seems to improve cognitive processing and is associated with long term negative impact across all health indicators. This is particularly concerning in a population that is already at high risk for diabetes, hypertension, obesity, and metabolic syndrome. Smoking cigarettes is one of the major contributors to the early mortality of people with SMI, and therefore it is always important to address tobacco use (especially smoking) in this population.
- **Effects on symptoms:** As with other substances, the use of nicotine to relieve anxiety or to increase mood can be associated with rebound anxiety or depression when the nicotine wears off. Withdrawal symptoms from nicotine can cause additional psychiatric symptoms, such as depressed mood, insomnia, and irritability[6]. When individuals attempt to stop or reduce smoking, it is likely that whatever symptoms they describe as being relieved by smoking will be more challenging in their attempts to quit.
- **Effects on medications:** Cigarette smoking induces the activity of CYP1A2 and 2B6. These enzymes metabolize several medications for the treatment of serious mental illness including clozapine, olanzapine, and fluvoxamine. This effect is not related to the nicotine component of tobacco. Nicotine replacement therapy does not influence CYP1A2 activity.[7,8] Smoking may actively counteract the effectiveness of medications, simultaneously relieving sedation or negative drug effects while reducing positive effect. Thus, individuals who are using tobacco or nicotine products may tend to need higher doses of medication to achieve the same effect as those who are non-smokers. In addition, dosages may need to be decreased when individuals stop smoking and increased if they resume smoking.

- **Effects on substance use disorders (SUD):** Recent research has indicated that individuals receiving treatment for SUD have better outcomes if they discontinue smoking/nicotine use at the same time.[9] Better understanding of the pathophysiology of SUD indicates that continued nicotine use results in continued stimulation of the euphoriant centers of the brain and helps to keep the "addiction" active. Many individuals with more serious SUD will continue to use nicotine even as they are addressing other substances, and while this may make progress more challenging in some ways, it does not prevent people from making progress when services are aligned in accordance with the individual's preferences.

PART 2: SCREENING AND INTERVENTION

For individuals with SMI, it is important to not only identify whether the person is using substances, but also to describe the pattern of substance use, whether the substance use is causing harm, and the degree to which the individual is in control of the substance use. Some individuals will have patterns of harmful use that are "in control" and do not meet criteria for the diagnosis of SUD. For individuals with a chronic psychiatric disability, any persistent substance use is likely to be harmful, even if there is no obvious intoxication or lack of control, as the substance use can interfere with the person's fragile brain equilibrium. Other individuals may have patterns of "out of control" substance use that are consistent with moderate to severe SUD. These require different levels of intervention. **Once substance use is identified, the assessment should inquire –for each type of substance - about the pattern of use: experiences and perceptions of harm because of that use pattern and the degree to which the individual experiences control – or lack of control – over that use.**

Brief Guide to Screening:

A. Screening requires practice. Developing a "welcoming" style to facilitate screening takes practice. It is a common concern that the person you are interviewing will not want to talk about their substance use, and that they might not tell the truth. In fact, most people who use substances talk about their substance use all the time; they just don't think it's a good idea to talk to you! How can you convey to the person you are screening that you would be a good person with whom to talk to about their substance use? The key is in the concept of welcoming. If you are genuinely open when the person shares their substance use with you (rather than disapproving or disappointed) they will be much less likely to conceal information. But it takes practice to do that, and to balance the fact that you don't recommend that they use substances with welcoming the opportunity to discuss their substance use openly. Remember that you can't help them make better choices if they don't discuss their choices at all.

B. Screening works best when it is integrated into the person's story. Pulling out a "screening tool" and asking questions one after the other often feels less personal and reinforces the person's natural inclination to say "no" to all the questions, just to get the painful process over with. Using a tool is helpful for the interviewer to remember things to ask about (and not to forget what to ask), but the art of doing this is to work the questions into the flow of the story so that the person can progressively feel more comfortable sharing (and that areas where the person is uncomfortable sharing can be more clearly identified). Some clients may feel more comfortable answering questions on a screening form, rather than face to face, but many will not.

C. Screening for tobacco use and other nicotine products should be routine in all SMI services. Tobacco screening is embedded in a broader approach to substance use screening. Remember, SUDs are more prevalent among the SMI population compared to the general population, and misuse of multiple substances is common.[10,11] Be sure to inquire about chewing tobacco, vaping, and other nicotine products when inquiring about smoking.

SMIAdviser
A Clinical Support System for Serious Mental Illness

Brief Guide to Intervention:

How you talk to people who indicate they are using tobacco or nicotine products is always based in a framework of welcoming, empathic, hopeful partnership and needs to be matched to the individual's stage of change for tobacco use as well as their personal goals for a happy, meaningful life (recovery goals).[12]

For instance, if an individual is in the precontemplation stage about tobacco use, the focus is on helping them move into the contemplation stage, that is to develop enough trust to engage in discussions about their tobacco use, so they can work in partnership with the team over time (often months) to make better decisions. The most important thing you can do is to maintain a welcoming strength-based relationship, which increases their ability to eventually discuss their nicotine use more freely. If the person is in the contemplation stage (or beyond this stage), then it is helpful to provide a recommendation of abstinence from tobacco/nicotine (without struggling with the person), and while indicating that the most important goal is to help the person make the best decisions for themselves), maintain the option of making progress in tiny steps (as opposed to abstinence being the only goal) and providing awareness of treatment options including medication treatment and how the mental health team can provide support for making even small steps toward change. The more information the person has about how the team can help support efforts to change, the more prepared they can be when they are ready to make a change to their substance use. More information is available here about Stages of Change and matching interventions with each stage.

Here are some tips that might be helpful in dialogue with an individual contemplating discontinuing tobacco use. You might try beginning the conversation with:

I find that a lot of people in your situation identify that using tobacco is helpful for them. Let's talk about what you find helpful, and how tobacco currently works for you and fits into your life. Is there anything that you don't like or find unhelpful about using tobacco?

Or…

The goal is to help YOU decide the right amount of tobacco use for you in order to achieve your personal goals for recovery/for a happy, hopeful, meaningful life. How do you figure out the right amount of tobacco for you to use?

Or…

In the long run even small amounts of tobacco lead your brain to have more trouble healing…and since you only get one brain, I would advise you to take the best care of your brain that you can. How do YOU decide the right amount of tobacco for you to have a happy life?

Maybe the individual says: *I "should" be able to use tobacco because it's legal, it's not that harmful, and all my friends [smoke, chew].*

You could say: *No one is saying you "can't" use tobacco…what I'm saying is that you have to decide what the right amount of tobacco is for YOU, given your goals and your mental health diagnosis. It is not "fair" that it's safer for your friends to use than you, but the truth is that you have a serious mental illness and a vulnerable brain, and they may not. So, it is a tough decision, and I will work with you to help you figure it out.*

Maybe the individual says: *But tobacco is the "only" thing that helps me get relief (in whatever way).*

You could say: *You are right that using tobacco is helpful in the short run. That's why so many people like it. The challenge for your decision making is that it may make things worse. Each time you use tobacco to cope with anxiety, in the long run it affects your brain, making your underlying anxiety worse. So, it's a tough decision as to what's best for you over time, and I will work with you to help figure it out.*

Maybe the individual says: *I think I may want to quit smoking.*

You could say: *One starting place that is helpful for a lot of people is to make a decision about how much tobacco is right for them in the moment and start to keep track of how much they use. I am happy to work with you to identify your daily "tobacco use" goal and help you to stay on target for that goal. Also, if you know your baseline, it's easier to figure out your next step, which may be cutting down a tiny bit, rather than stopping all at once. Any way you decide to make progress, I will work with you to figure out how to proceed. So, whether you want to just start by keeping track of how much you use, or you want to cut down a little bit, or you want to go ahead and stop, we can work with you to help you get to where you want to be.*

PART 3: TREATMENT OPTIONS

Treatment options can be included as an educational piece for a person in contemplation, as a way of helping that person understand how many options are available. This is also important when a person is in preparation for change. Note that for many individuals, the smaller and easier the first step, the easier it is to get started down the path to reducing or eliminating tobacco/ nicotine use.

Psychopharmacology: Any pharmacologic agent that is helpful to people addressing tobacco use in the general population can be helpful to those with SMI. Recent reports have indicated that varenicline is the most effective anti-craving agent for nicotine use for people with schizophrenia.[13] Early reports that varenicline exacerbates psychiatric symptoms have not proven true in general in subsequent studies. Bupropion can also be effective, though somewhat less so than varenicline.[14]

Further, nicotine replacement therapies (NRT), either alone or in combination with anti-craving agents can be helpful as well. All NRT products are potentially useful. Note that individuals are likely to need instruction on how to use NRT products properly. A complete list of FDA-approved medications for tobacco cessation is available through this link.[15]

Psychosocial interventions: In addition to medication, making changes in tobacco use for individuals with SMI generally also requires psychosocial interventions to make different choices and have the skills to implement those choices. The skills involve self-management skills for managing triggers, cravings, and risky situations, as well as skills for creating a support system (professionals, family/friends, peers) and using that support system by regularly asking for help.

Comprehensive Care: Individuals with SMI and comorbid substance use often have poorer medical outcomes and require care coordination for management of both psychiatric and medical illnesses. Treatment plans should be individualized to each patient's unique needs and may include medication, counseling or psychotherapies, mutual support groups, and additional psychosocial interventions.

Although the ideal recommendation for someone with SMI and tobacco use of any amount is complete abstinence (given the risks and evidence of worse outcomes), for many individuals their initial effort will be to cut down their use. These first steps should be applauded, and the person should be assisted to set goals for limiting use, evaluate the effects (pro and con) and determine whether they are successful in reaching their goals. As they make progress over time, they are often more willing to continue to limit and eventually eliminate use, as they see more hope of achieving their recovery goals.

Note that assisting individuals with SMI and nicotine use requires the sufficient intensity of intervention to address their SUD, while continuing to provide treatment and support for their mental illness, and adapting any SUD interventions (skill building, support development) to accommodate their level of psychiatric and/or cognitive disability.

References

1. Dixon L, Medoff DR, Wohlheiter K, DiClemente C, Goldberg R, Kreyenbuhl J, et al. Correlates of severity of smoking among persons with severe mental illness. Am J Addict. 2007 Apr;16(2):101–10.
2. 2. Substance Abuse and Mental Health Services Administration. Key Substance Use and Mental Health Indicators in the United States: Results from the 2019 National Survey on Drug Use and Health [Internet]. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.; 2019 p. 114. (NSDUH Series H-55). Report No.: HHS Publication No. PEP20-07-01-001. Available from: https://www.samhsa.gov/data
3. 3. Ziedonis D, Hitsman B, Beckham JC, Zvolensky M, Adler LE, Audrain-McGovern J, et al. Tobacco use and cessation in psychiatric disorders: National Institute of Mental Health report. Nicotine Tob Res Off J Soc Res Nicotine Tob. 2008 Dec;10(12):1691–715.
4. 4. Forchuk C, Norman R, Mall A, et al. Schizophrenia and the motivation for smoking. Perspect Psychiatr Care. 2002;38:41-9.
5. 5. Degenhardt L, Dierker L, Chiu WT, et al. Evaluating the drug use "gateway" theory using cross-national data: consistency and associations of the order of initiation of drug use among participants in the WHO World Mental Health Surveys. Drug Alcohol Depend 2010;108:84-97.
6. 6. Rxforchange: Home [Internet]. [cited 2021 May 25]. Available from: https://rxforchange.ucsf.edu/
7. 7. Zhou SF, Yang LP, Zhou ZW, et al. Insights into the substrate specificity, inhibitors, regulation, and polymorphisms and the clinical impact of human cytochrome P450 1A2. AAPS J 2009;11:481-94.
8. 8. Washio I, Maeda M, Sugiura C, et al. Cigarette smoke extract induces CYP2B6 through constitutive androstane receptor in hepatocytes. Drug Metab Dispos 2011;39:1-3.
9. 9. Campbell BK, Le T, Tajima B, Guydish J. Quitting smoking during substance use disorders treatment: Patient and Treatment-related variables. J Subst Abuse Treat 2017;73:40-6.
10. 10. Substance Abuse and Mental Health Services Administration. Key Substance Use and Mental Health Indicators in the United States: Results from the 2019 National Survey on Drug Use and Health [Internet]. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.; 2019 p. 114. (NSDUH Series H-55). Report No.: HHS Publication No. PEP20-07-01-001. Available from: https://www.samhsa.gov/data
11. 11. Hartz SM, Pato CN, Medeiros H, Cavazos-Rehg P, Sobell JL, Knowles JA, et al. Comorbidity of Severe Psychotic Disorders With Measures of Substance Use. JAMA Psychiatry. 2014 Mar 1;71(3):248.
12. 12. Zimmerman GL, Olsen CG, Bosworth MF. A "Stages of Change" Approach to Helping Patients Change Behavior. Am Fam Physician. 2000 Mar 1;61(5):1409–16.
13. 13. Williams JM, Anthenelli RM, Morris CD, et al. A randomized, double-blind, placebo-controlled study evaluating the safety and efficacy of varenicline for smoking cessation in patients with schizophrenia or schizoaffective disorder. J Clin Psychiatry 2012;73:654-60.
14. 14. Barua RS, Rigotti NA, Benowitz NL, Cummings KM, Jazayeri M-A, Morris PB, et al. 2018 ACC Expert Consensus Decision Pathway on Tobacco Cessation Treatment: A Report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents. J Am Coll Cardiol. 2018 Dec 25;72(25):3332–65.
15. 15. Pharmacologic Product Guide: FDA-Approved Medications for Smoking Cessation. :2.

GRANT STATEMENT

Funding for SMI Adviser was made possible by Grant No. SM080818 from SAMHSA of the U.S. Department of Health and Human Services (HHS). The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, SAMHSA/HHS or the U.S. Government.