Clinical Practice Guidelines for the Treatment of Tobacco Use Disorder

Background

Tobacco use is the leading preventable cause of disease, disability, and death in the United States,[1] disproportionately affecting individuals with behavioral health disorders (mental health and substance use conditions).[2] Compared to the general population, rates of tobacco use are two to three times higher among individuals with behavioral health disorders.[3] Consequently, they experience greater nicotine dependence, greater withdrawal symptoms when discontinuing tobacco use, and lower rates of tobacco use abstinence.[4] In addition to the high rates of tobacco use disorder, individuals with behavioral health disorders experience excess morbidity and mortality from tobacco use, dying on average 25 years prematurely, with leading causes being tobacco-related chronic diseases.[5]

Tobacco use negatively impacts behavioral health treatment.[6] Tobacco use has been associated with increased depressive symptomatology,[7] increased risk for hospitalization and suicidal thoughts and attempts,[8] and greater risk of relapse to alcohol and illicit drug use.[9]

Despite the high rates of tobacco use and excess morbidity and mortality attributable to tobacco use, individuals with behavioral health disorders have less access to tobacco use treatment.[10] Several factors contribute to the reduced access to evidence-based tobacco treatment in behavioral health settings, including targeted tobacco industry marketing to individuals with mental illness,[11] lack of provider knowledge about evidence-based treatment for tobacco use disorder,[12] and provider misconceptions about the impact of tobacco abstinence on behavioral health outcomes.[13] Many tobacco users with behavioral health conditions are motivated to stop tobacco use,[14] and may benefit from evidence-based tobacco treatments.[15] As such, CBH is committed to ensuring its beneficiaries have access to comprehensive tobacco use treatment across behavioral health settings.

Purpose

The aim of the Tobacco Use Disorder Clinical Practice Guidelines is to disseminate evidence-based interventions for tobacco use identification and treatment such that these interventions become the standard of care across Community Behavioral Health (CBH) Levels of Care. Integrating evidence-based interventions for tobacco use abstinence into behavioral health settings is a recognized strategy to increase tobacco use treatment utilization.[16] Additionally, it promotes recovery and enhances outcomes for individuals with behavioral health conditions.[17] These guidelines derive from multiple sources, including the U.S. Public Health Service (USPHS), the U.S. Preventive Services Task Force (USPSTF), the American Society of Addiction Medicine (ASAM), the American Psychiatric Association (APA), and the Association for the Treatment of Tobacco Use Disorder (ATTUD).

---

[1] Centers for Disease Control and Prevention (CDC), 2017.
[2] Prochaska, Das & Young-Wolff, 2017.
[3] Williams, Stroup, Brunette & Raney, 2014
[4] Prochaska, Delucchi & Hall, 2004.
[5] Colton & Manderscheid, 2006.
[6] Prochaska, 2010
[7] Taylor et al., 2014
[8] Li, Yang, Ge, Hao, & Wang, 2012
[9] Prochaska, 2010.
[10] Das & Prochaska, 2017; Marynak et al., 2018
[11] Prochaska, Das & Young-Wolff, 2017
[12] Williams et al., 2010
[13] Das & Prochaska, 2017
[14] Prochaska & Das, 2017.
[15] Prochaska, Das & Young-Wolff, 2017; CDC, 2013; Compton, 2018.
[16] Williams et al., 2010.
[17] ASAM, 2013.

Definitions

- ***Nicotine***: The primary psychoactive and addictive chemical in tobacco products.

- ***Tobacco Use**:* Tobacco use refers to the use any tobacco product, including but not limited to: cigarettes, e-cigarettes and other electronic nicotine delivery systems (ENDS), cigars, cigarillos and filtered cigars, smokeless tobacco (including snus pouches), pipe tobacco, dissolvable tobacco in the form of strips, sticks, or lozenges, or smoking tobacco through a hookah or waterpipe (Appendix B).

- ***Tobacco Use Disorder***: Consistent with other substance use disorders, these guidelines conceptualize tobacco use disorder as a chronic, compulsive disorder requiring long-term management and intensive treatment approaches.

- ***Tobacco Withdrawal***: Withdrawal syndrome occurs when individuals abruptly stop tobacco use or reduce the amount of tobacco use. Withdrawal symptoms include irritability/anger/frustration, anxiety, depressed mood, difficulty concentrating, increased appetite, insomnia, and restlessness.[18]

Screening and Assessment

Screening

- All members should be asked if they use tobacco products should have their tobacco use status documented on a regular basis.[19] Sample tobacco use screening questions can be found in Appendix C.

- Clinic-based identification systems, such as adding tobacco use as a vital sign in the Electronic Health Record (EHR), have shown to increase the likelihood that tobacco use is assessed and documented consistently.[20] Suggested timeframes for screening include the following:

  - ✓ All new members at admission/intake;
  - ✓ Quarterly for tobacco users;
  - ✓ Monthly for tobacco users attempting to cease tobacco use;
  - ✓ Annually for non-tobacco users.

Assessment

- Once tobacco use is identified, tobacco use history should be assessed. When assessing tobacco use history, both routine questions about tobacco use and standardized, evidence-based instruments (e.g., questionnaires) should be used.[21]

  - ✓ Key questions when gathering a tobacco use history may include the following: types of tobacco products used most frequently; amount of tobacco use on a regular basis; age of tobacco use onset; any recent changes in tobacco use; previous quit attempts, including most recent attempt, duration of attempt, and methods tried on previous quit attempts; withdrawal symptoms experienced; and reason(s) for relapse.[22]

  - ✓ Assess for tobacco withdrawal. The *Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition (DSM-5™)* outlines the diagnostic criteria for tobacco withdrawal *(Appendix D).*

  - ✓ Commonly used self-report tobacco measures with high reliability in tobacco users with behavioral health conditions include The Fagerström Test for Nicotine Dependence (FTND)[23] and the Heaviness of Smoking Index (HIS).[24]

---

[18] American Psychiatric Association, 2013.
[19] Fiore et al., 2008; Siu, 2015.
[20] Fiore et al., 1995; Ahluwalia et al., 1999.
[21] Fiore et al., 2008.
[22] University of Massachusetts Medical School. Center for Tobacco Treatment Research and Training.
[23] Heatherton et al., 1991; Weinberger et al., 2007.
[24] Heatherton et al, 1989.

- Interventions for all tobacco users should be categorized as either treatments for tobacco users who want to stop tobacco use or motivational treatments for those not interested in stopping tobacco use (Appendix E).[25]

- Screening and assessment results should be documented in the member's medical record.

Tobacco Use Disorder Diagnosis and Documentation

- Formal establishment of a tobacco use disorder diagnosis is important as many individuals with behavioral health disorders may qualify for a diagnosis of tobacco use disorder. Tobacco-related diagnoses thus should be documented in the member's medical record,[26] consistent with the *Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition (DSM-5™)* and/or the *International Classification of Diseases Diagnostic, Tenth Revision (ICD-10)*.

- A tobacco use disorder diagnosis should be included in the problem list, overall treatment plan, and discharge plan.[27]

Tobacco Use Disorder Treatment

- All tobacco users with behavioral health conditions should be offered tobacco use disorder treatment.[28] Because individuals with behavioral health conditions experience higher rates of tobacco use disorder, more intensive interventions are recommended, including increasing the length and number of treatment sessions.[29]

- Intensive interventions combining pharmacotherapy and counseling (behavioral interventions) are more effective for tobacco use abstinence than either pharmacotherapy or counseling alone.[30] Both counseling and pharmacotherapy should be offered to members. Simply encouraging members to stop smoking is insufficient. All members who use tobacco should be provided with evidence-based treatment, including pharmacotherapy, to help them abstain.[31]

- Counseling interventions should be matched to the member's stage of change and offered in person and telephonically, individually or in groups.[32] Counseling and behavioral therapies should involve practical counseling (problem solving/skills training) and emphasize development of social supports. Evidence-based counseling approaches to tobacco use include motivational interviewing and cognitive-behavioral therapy.

- Pharmacotherapy is an effective evidence-based tobacco use disorder treatment for individuals with behavioral health conditions.[33] Pharmacotherapy can facilitate tobacco use abstinence by reducing nicotine withdrawal symptoms, reducing the reward effects of nicotine from smoking by blocking nicotine receptors, and by providing an alternative source of nicotine.[34] All tobacco users should be offered first-line U.S. Food and Drug Administration (FDA)-approved abstinence medications, when indicated (Appendix F).

- Tobacco use disorder treatment should be documented in the member's medical record.

---

[25] Fiore et al., 2008; Williams et al., 2010
[26] Fiore et al, 2008; ASAM, 2013.
[27] Fiore et al., 2008; ATTUD.
[28] Fiore et al., 2008
[29] Fiore et al., 2008.
[30] Fiore et al., 2008.
[31] Leone et al., 2020
[32] Fiore et al., 2008; Siu, 2015
[33] Fiore et al., 2008; Sui, 2015; Das & Prochaska, 2017
[34] Prochaska & Benowitz, 2019.

Discharge Planning

- Tobacco use status should be integrated into the discharge plan. The discharge plan will vary depending on the level of care and the progress made toward tobacco use recovery. Planning should include a clear and specific plan for follow up at the next recommended level of care.

- Discharge plan should be documented in the member's medical record.

Tobacco-Recovery Environment Policy

To promote recovery and create safer and healthier environments for members, staff and visitors, behavioral health settings may opt to institute a tobacco-free environment. CBH expects providers to meet members where they are in their recovery in a supportive, non-punitive manner and to adopt a therapeutic, clinically based approach. Relevant provider notifications can be found below:

December 2021 Provider Notification

June 2019 Provider Notification

Monitoring

CBH providers are expected to follow the above guidelines for tobacco use disorder. Adherence to the standards will be assessed through CBH monitoring and oversight, including Quality, Clinical, and Compliance Department protocols. CBH encourages its providers to maintain internal quality management programs to ensure treatment adheres to these and other applicable guidelines. CBH will continue to develop systematized strategies to support high quality care within the network, including tracking of valid quality of care metrics for various elements of treatment. In certain instances, CBH may request medical records to be reviewed for quality-of-care concerns. In addition, CBH will be tracking and sharing the following performance metrics with relevant providers:

CPG Component	***Metric***	***Data Source***	***Numerator***	***Denominator***
Screening	Percentage of CBH members screening for tobacco use over the age of 13 in the last 12 months.	CBH Data Informatics	CBH members who were screened for tobacco use at least once within the last 12 months.	All unduplicated CBH members age 13 years of age or older.
Counseling	Percentage of tobacco users who were provided tobacco use disorder counseling.	CBH Data Informatics	CBH members who screened positive for tobacco use and were provided tobacco counseling at their last visit.	All members who have a tobacco use disorder diagnosis in the past 12 months.
Pharmacotherapy	Percentage of tobacco users who were provided pharmacotherapy (NRT or medication).	CBH Data Informatics	CBH members who screened positive for tobacco use disorder and were treated via pharmacotherapy at their last visit.	All members who have a tobacco use disorder diagnosis the past 12 months.

Appendix A: References

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders: DSM 5.* American Psychiatric Association; Washington: 2013.

American Society of Addiction Medicine (2013). *Treatment Criteria for Addictive, Substance-Related. And Co-Occurring Conditions.* The Change Companies.

Centers for Disease Control and Prevention (2017). https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm

Colton, C.W. & Manderscheid, R.W. (2006). Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. *Preventing Chronic Disease, 3*: A42.

Das, S. & Prochaska, J.J. (2017). Innovative approaches to support smoking cessation for individuals with mental illness and co-occurring substance use disorders. *Expert Review of Respiratory Med*icine, 11(10):841–850.

Fiore, M.C., Jaén, C.R., Baker. T.B., et al. (2008). Treating Tobacco Use and Dependence*:* 2008 Update*.* Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services.

Heatherton, T.F., Kozlowski, L.T., Frecker, R.C. & Fagerstrom, K.O. (1991). The Fagerstrom Test for Nicotine Dependence: a revision of the Fagerstrom Tolerance Questionnaire. *British Journal of Addiction*, *86*:1119-1127.

Heatherton, T.F., Kozlowski, L.T., Frecker, R.C., Rickert,W. & Robinson, J. (1989). Measuring the Heaviness of Smoking: Using self-reported time to the first cigarette of the day and number of cigarettes smoked per day. *British Journal of Addiction*, *84(7)*:791-799.

Leone, F. T., Yuqing, Z., Evers-Casey, S, Evins, A., Eakin, M. N., Fathi, J., et al. (2020). Initiating pharmacologic treatment in tobacco-dependent adults: an official American Thoracic Society clinical practice guideline. *American Journal of Respiratory and Critical Care Medicine, 202*(2), e5-e31.

Li, D., Yang, X., Ge, Z., et al. (2012). Cigarette smoking and risk of completed suicide: a meta-analysis of prospective cohort studies. *Journal of Psychiatric Research, 46(10)*:1257–1266.

Prochaska, J.J. & Benowitz N.L. (2019). Current advances in research in treatment and recovery: nicotine addiction. *Science Advances, 5(10)*: 1-23.

Prochaska, J.J., Das, S. & Young-Wolff, K.C. (2017). Smoking, mental health and public health. *Annual Review of Public Health, 38(16)*: 5-185.

Prochaska, J.J. (2010). Failure to treat tobacco use in mental health and addiction treatment settings: a form of harm reduction? *Drug and Alcohol Dependence, 110(3):*177–182.

Siu, A. L.; U.S. Preventive Services Task Force. (2015). Behavioral and Pharmacotherapy Interventions for Tobacco Smoking Cessation in Adults, Including Pregnant Women: U.S. Preventive Services Task Force Recommendation Statement. *Annals of Internal Medicine*, *163(8)*:622–634.

Taylor, G., McNeill,A. Girling, A., Farley A, Lindson-Hawley, N. & Aveyard, P. (2014). Change in mental health after smoking cessation: systematic review and meta-analysis. *British Medical Journal*, *348:* g1151.

Weinberger, A.H., Reutenauer, E.L., Allen, T.M. et al. (2007). Reliability of the Fagerstrom Test for Nicotine Dependence, Minnesota Nicotine Withdrawal Scale, and Tiffany Questionnaire for Smoking Urges in smokers with and without schizophrenia. *Drug and Alcohol Dependence*, *86*:278–282.

Williams, J.M., Stroup, T.S., Brunette, M. F. & Raney, L. E. (2014). Tobacco use and mental illness: a wake-up call for psychiatrists. *Psychiatric Services, 65(12)*: 1406-1408.

Williams, J.M., Zimmerman, M.H., Steinberg, M.L., Gandhi, K.K., Delnevo, C., Steinberg, M.B, & Foulds, J. (2010). A comprehensive model of mental health tobacco recovery in New Jersey. *Administration and Policy in Mental Health*, *8(5):*368-383.

Appendix B

Diversity of Tobacco Products[35]

Product	*Definition*	*Types*	*Nicotine Levels*
Cigarette	Tobacco rolled in paper for smoking	A typical cigarette weighs <1 g; regular length (70 mm long), king (84 mm), 100s (100 mm), and 120s (120 mm)	Average in rod, 13.5 mg (range: 11.9–14.5 mg); nicotine yield to the smoker: 1–1.5 mg/cigarette
Blunt	Cannabis filled in a hollowed-out cigarillo shell	- - - - - - - - - - - - -	Nicotine intake much lower than from cigarette or cigar smoking, but, based on animal studies, could enhance rewarding effects of delta 9-tetrahydrocannbinaol
Smokeless Tobacco	Tobacco inserted between lip and gum or snorted into the nose rather than smoked by the user	Snuff (ground tobacco), snus (ground tobacco in a tea bag–like pouch), chew (shredded tobacco)	Nicotine concentrations vary, range of 0.2 to 34 mg/g, the more alkaline products are capable of delivering higher levels of nicotine
Waterpipe/Hookah	Charcoal-heated flavored tobacco passed through a water-filled chamber that cools the smoke	Water tobacco is a mixture of dried fruit, molasses and glycerin, and conventional tobacco leaf	Average of 1.13 mg/g and high of 3.30 mg/g for product containing nicotine; nicotine-free for herbal (nontobacco) varieties
Heated Tobacco	Electronic devices that heat reconstituted tobacco sticks treated with a glycerin humectant to deliver an aerosol	IQOS, Glo, Ploom Tech	Nicotine delivery can match that of conventional cigarettes
E-Cigarettes	Electric devices that produce an aerosol from a liquid that typically contains nicotine, propylene glycol, vegetable glycerin, and flavorings	Cigalikes/e-pens, tank systems, pods/nicotine salts (e.g., benzoate and lactate)	E-liquid nicotine content from 0 to 100 mg/ml. Nicotine delivery can match that of conventional cigarette but varies by device design (heating temperature), e-liquid nicotine content, and user behavior

[35] Adapted from Prochaska and Benowitz, 2019, p.2.

Appendix C

Sample Screening Questions for Adolescents and Adults

Adolescent Tobacco Use Screening Questionnaire[36]

1. Do you have friends who use any tobacco products (e.g., cigarettes, electronic cigarettes, vapes, smokeless tobacco) in the past year?
   - □ Yes
   - □ No

2. In the past year, have you used tobacco products (e.g., cigarettes, electronic cigarettes, vapes, smokeless tobacco)?
   - □ Yes
   - □ No

3. In the past 30 days, on how many days have you used tobacco products (e.g., cigarettes, electronic cigarettes, vapes, smokeless tobacco)?
   - □ Yes
   - □ No

4. In the past 90 day, on how many days have you used tobacco products (e.g., cigarettes, electronic cigarettes, vapes, smokeless tobacco)?
   - □ Yes
   - □ No

5. In the past year, on how many days have you used tobacco products (cigarettes or e-cigarettes)?
   - □ Yes
   - □ No

Adult Tobacco Use Questionnaire

1. In the past year, have you used tobacco products (cigarettes or e-cigarettes)?
   - □ Yes
   - □ No

2. In the past 30 days, on how many days have you used tobacco products (e.g., cigarettes, electronic cigarettes, vapes, smokeless tobacco)?
   - □ Yes
   - □ No

3. In the past year, on how many days have you used tobacco products (cigarettes or e-cigarettes)?
   - □ Yes
   - □ No

[36] Questions derive from the Brief Screening Instrument for Adolescent Tobacco, Alcohol, and Drug Use (BSTAD).

Appendix D

Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition (DSM-5™) Tobacco Withdrawal Diagnostic Criteria

The DSM-5 outlines that the following four points should be checked off for a tobacco withdrawal diagnosis to be made:

1. The individual has used tobacco daily for a minimum of several weeks or more

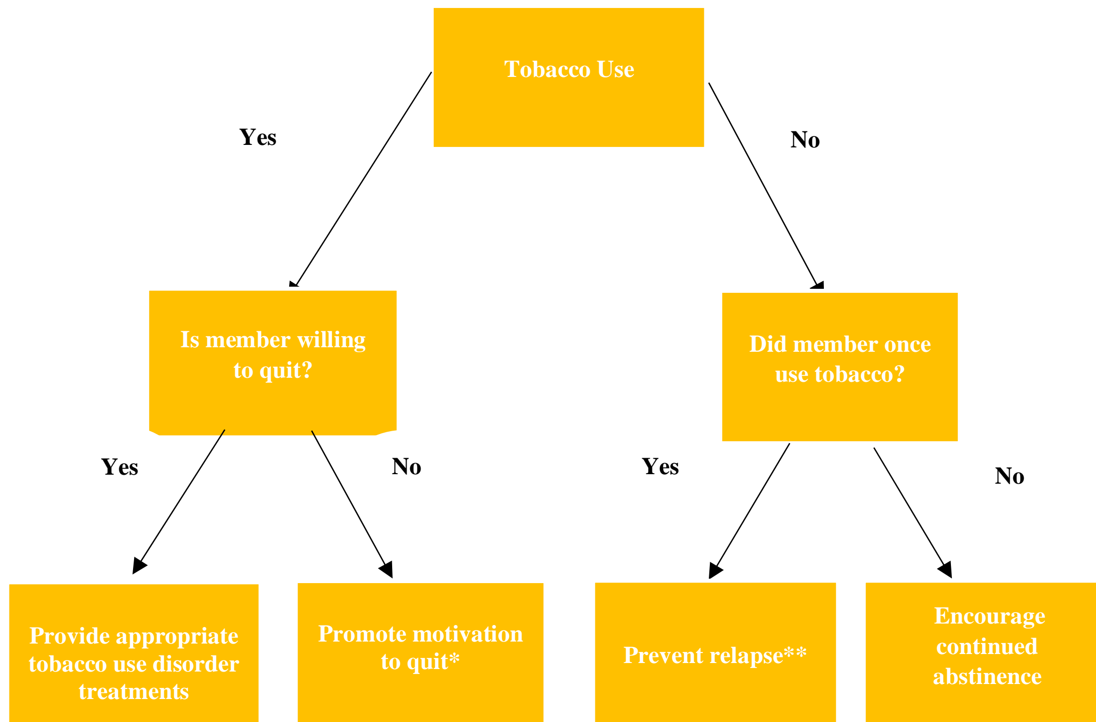
2. Tobacco use has been reduced or abruptly discontinued and four or more of the following symptoms have been experienced within the 24 hours since:
    a. Feeling irritable, angry or frustrated
    b. Feeling anxious
    c. Finding it difficult to concentrate
    d. Feeling restless
    e. Experiencing increased appetite
    f. Feeling depressed
    g. Having trouble sleeping

3. The symptoms experienced (mentioned above) must be causing the individual significant distress or affecting important areas of their life, such as social interactions or work.

4. The symptoms cannot be attributed to another medical condition or mental disorder, including intoxication or withdrawal from another substance

Appendix E

Algorithm for Treating Tobacco Use Disorder[37]



*Provide motivational enhancement therapy and offer pharmacotherapy
**Relapse prevention interventions are not necessary when member has not used tobacco for many years

[37] Fiore et al., 2008.

Appendix F

FDA-Approved Medications for Tobacco Use Abstinence[38]

Product	Description	Dosing
Gum	Nicorette; Generic; OTC 2 mg; 4 mg original, cinnamon, fruit, mint	Based on time of first cigarette: ≤30 minutes after waking: 4 mg >30 minutes after waking: 2 mg Weeks 1–6: 1 piece q 1–2 hours. Weeks 7–9: 1 piece q 2–4 hours. Weeks 10–12: 1 piece q 4–8 hours. Maximum, 24 pieces/day. Duration: up to 12 weeks.
Lozenge	Nicorette; Generic Nicorette Mini; OTC 2 mg;4 mg; cherry, mint	Based on time to first cigarette of the day: <30 minutes = 4 mg >30 minutes = 2 mg Weeks 1–6: 1 lozenge q 1–2 hours. Weeks 7–9: 1 lozenge q 2–4 hours. Weeks 10–12: 1 lozenge q 4–8 hours. Maximum: 20 lozenges/day. Duration: up to 12 weeks.
Nasal Spray	Nicotrol NS; Prescription Metered spray 10 mg/mL nicotine Solution	1–2 doses/hour (8–40 doses/day) Maximum: 5 doses/hour or 40 doses/day. Initially use at least 8 doses/day ▪Duration: 3 months.
Oral Inhaler	Nicotrol Inhaler 10 mg cartridge delivers 4 mg inhaled vapor	6–16 cartridges/day Individualize dosing; initially use 1cartridge q 1–2 hours Initially use at least 6 cartridges/day. Duration: 3–6 months.
Transdermal Patch	NicoDerm CQ1, Generic OTC (NicoDerm CQ, generic) 7 mg, 14 mg, 21 mg (24-hr release)	>10 cigarettes/day: 21 mg/day x 4–6 weeks; 14 mg/day x 2 weeks; 7 mg/day x 2 weeks. ≤10 cigarettes/day: 14 mg/day x 6 weeks;

[38] Adapted from Prochaska and Benowitz, 2019, p.10.

		7 mg/day x 2 weeks. Rotate patch application site daily; do not apply a new patch to the same skin site for at least one week. Duration: 8–10 weeks
Bupropion SR	Zyban®, Generic 150 mg sustained release Tablet	150 mg po q AM x 3 days, then 150 mg po bid (dnot exceed 300 mg/day). Begin therapy 1–2 weeks **prior** to quit date. Dose tapering is not necessary. Duration: 7–12 weeks, with maintenance up to 6 months in selected patients.
Varenicline	Chantix® 0.5 mg;1 mg tablet	Days 1–3: 0.5 mg po q am Days 4–7: 0.5 mg po bid Weeks 2–12: 1 mg po bid Begin therapy 1 week prior to quit date. Dose tapering is not necessary Dosing adjustment is necessary for patients with severe renal impairment. Duration: 12 weeks; an additional 12-week course may be used in selected patients. May initiate up to 35 days before target quit date OR may reduce smoking over a 12-week period of treatment prior to quitting and continue treatment for an additional 12 weeks.